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DOCTOR WHO

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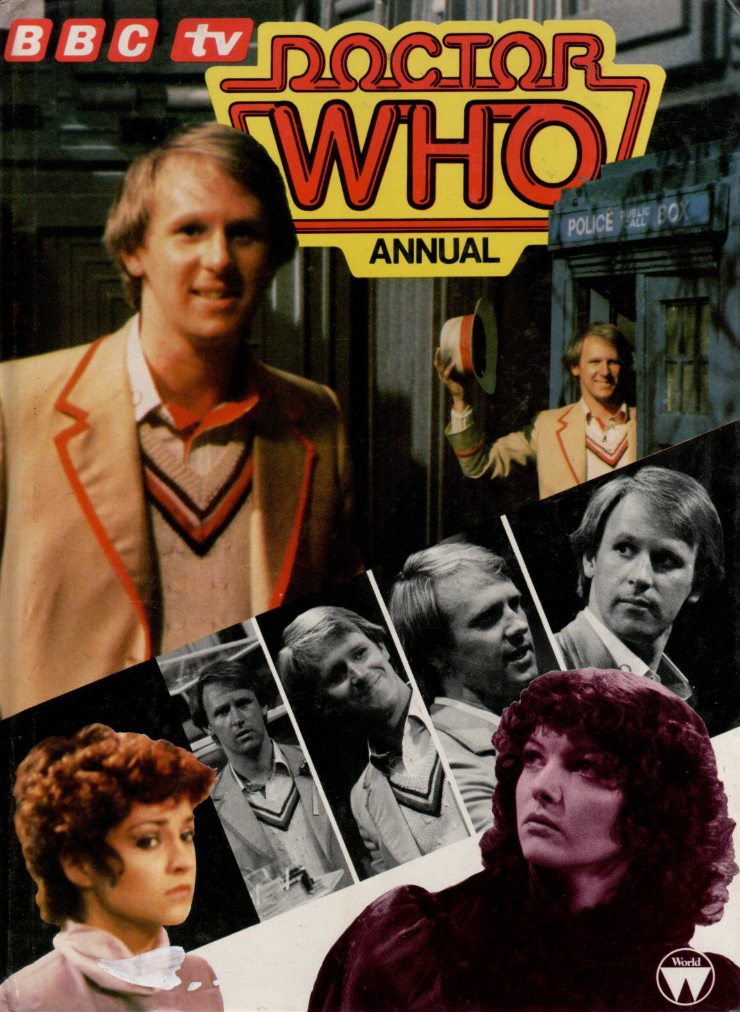
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DOCTOR WHO
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Published in Great Britain by
World International Publishing Limited.
A Pentos Company,
P. O. Box 111, Great Ducie Street, Manchester M60 3BL.
by arrangement with the British Broadcasting Corporation.
Printed in Belgium.
SBN 7235 6653 4.

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£2.50

DANGER DOWN BELOW

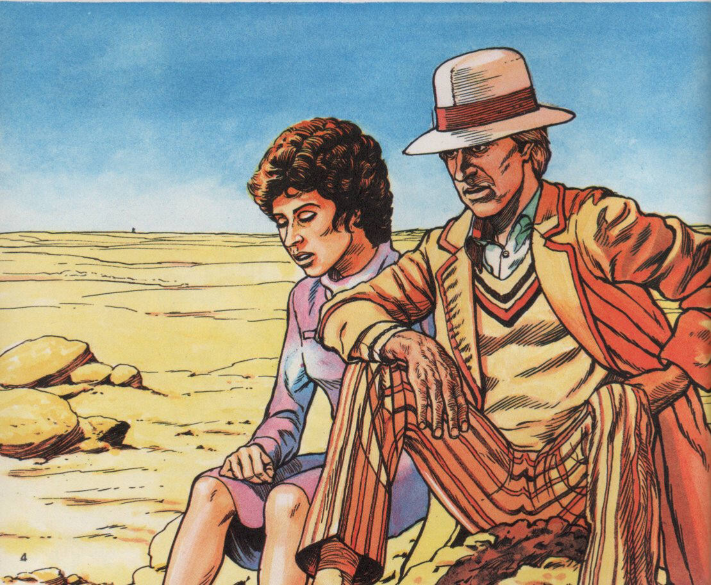
Objecting to the heat and her aching muscles, Tegan, the Doctor's young Australian assistant, plonked herself down on a small rock and refused to move until she'd rubbed some life back into her feet. Expecting an objection from the ever-eager Doctor, she was pleasantly surprised when he nodded and sat down beside her, mopping his brow.

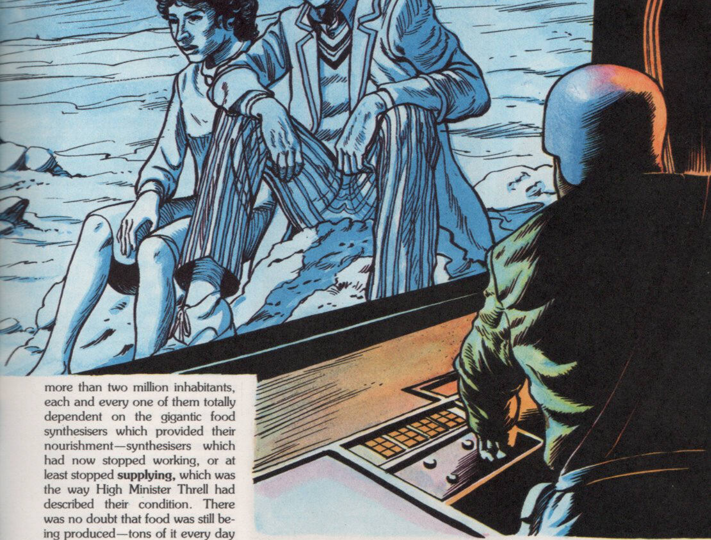
All around them, the surface of Aronassus 49 stretched endlessly into the distance, a drab, flat landscape punctuated only by the occasional small cluster of rocks that offered little or no protection from the scorching rays of the planet's binary suns. Even the Doctor, with a Time Lord's dual respiratory system, was feeling the heat!

Their long walk had been sheer drudgery, Tegan reflected, and monotonous. Even now, after over two hours of travel, she could still see the Tardis shimmering in the distance, a tiny blue pinprick isolated in the orange expanse. Tegan wished that she was back there with Nyssa, relaxing in the cool comforts of the time and space vessel's shaded cloisters. But she wasn't. Instead she rubbed her feet and sweated. Why did the Doctor always have to materialise the Tardis in the middle of nowhere!

The Doctor was in no mood to answer such trivial questions. Staring out at nothing, he thought about the call that had brought him to this outlying world: an urgent request for help from one of the few people in time and space that the Time Lord could actually call an old and dear friend, High Minister Threll of the Prime City Triumvirate.

Prime City was the largest conurbation of Aronassus 49, a vastly complex city located entirely underground, a location made necessary because of the impracticality of working and sustaining life on the surface. An entirely self-contained community, Prime City housed





more than two million inhabitants, each and every one of them totally dependent on the gigantic food synthesisers which provided their nourishment—synthesisers which had now stopped working, or at least stopped **supplying,** which was the way High Minister Threll had described their condition. There was no doubt that food was still being produced—tons of it every day—but someone or something was intercepting it whilst in transit from the production plants to the consumer outlets. Two million plus people were getting nothing to eat other than the barest essentials which they could scrounge—or steal—from stores. Prime City was dying and Threll had turned to the one person he know who might possess the knowledge to discover the cause: the Doctor.

At that moment, the Doctor and Tegan were the subject of intense scrutiny from two guards monitoring them on the security screen within the city. Despite Threll's knowledge of the Doctor, there was not a glimmer of recognition or friendliness in their eyes. As essential personnel, both men received a more than average food allocation, but even they showed the first signs of starvation in their ghastly skin pallor. Both were becoming increasingly irritable and they felt only suspicion towards the strangers.

"City dwellers?"

"There is no record of them in central computers."

"Then who are they?" the chief guard demanded loudly.

His subordinate recoiled—aware that he was playing with fire if he displeased his superior. The chief guard had been heading the search for the cause of the missing food for over a week now, and he had turned up absolutely nothing, although he had mysteriously lost four men, adding to the burning anger and frustration building up inside him.

"Strangers, sir," he said cautiously. "Perhaps the cause of our problems?"

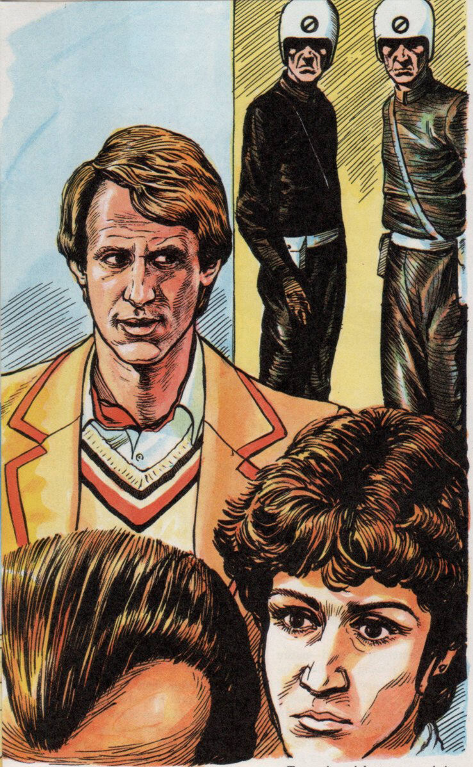
The chief guard exploded. "Not perhaps! I am sick of possibilities!" He glared at the screen. If these strangers **were** responsible for the city's plight then they would pay! If they were **not** responsible then they would become scapegoats on which he could vent his anger and frustration. He spun to face the other guard. "Take them," he ordered, adding grimly, "by force if necessary."

Tegan awoke with a start, as if snapping out of a trance. Where was she? What had happened? Looking around her, she saw she was lying on a bed in a small, drab room. She knew immediately what it was—a cell, and she was a prisoner! For a moment a surge of panic threatened to overwhelm her but then she saw the Doctor. standing calmly by the door, examining its force field.

Tegan got up from the bed. "What happened?"

The Doctor turned to face her. "Neuro-paralysis dart. Not exactly the welcome I expected."

That made Tegan remember.



She had been sitting out in that awful wasteland when she'd felt a numbing stab in the back which quickly enveloped her, and then... and then she was here. Whatever that neuro-thingummy was, it was very effective. "Doctor, I..."

"Shh!" The Doctor quietened her quickly: "Someone's coming."

Tegan heard footsteps and then three men stood framed in the doorway, their appearance rippling because of the force field effect. Two were dressed in black and were obviously guards, but the third was dressed almost regally, and he emanated authority.

"Threll!" cried the Doctor in recognition.

The Doctor's youthful appearance caused Threll to stare in at his friend. It was a striking change since the last time the two had met, when the Doctor had been in one of his previous incarnations. But Threll's shock was only momentary, for he probably knew more about the remarkable capabilities of a Time Lord than any other non-Gallifrean, and this apparent stranger was instantly recognised. "I find your powers of rejuvenation disconcerting and somewhat enviable, my friend," he said, smiling.

The Doctor introduced Tegan and the small-talk of greeting was exchanged. All the time the Doctor was drawn to studying Threll's face —he was shocked that even he was showing signs of food deficiency, making his normally bold features sunken and shallow. Threll was probably sacrificing some of his food allocation to those more in need, he thought.

Threll turned to the guards. "Release them," he said. "My apologies for your abrupt mode of arrival, Doctor. My security forces are on edge, as you will understand."

The Doctor nodded, looking at the guards. Even now they were regarding Tegan and himself with a worrying mixture of suspicion and animosity. In the past few days they had probably learned to trust no one. Within seconds, though, the force field was switched off and Threll began to lead the Doctor and Tegan off down the corridor, leaving the guards to attend to other business. But as he walked, the Doctor could feel the probing eyes of the guards focused on his back and observed that Threll was walking with a tense unease—perhaps there was more danger here than the Doctor had originally thought?

The walk to Threll's private chambers was long, and the Doctor had a lot of opportunities to witness the state of the city. The tension he had felt in the cell corridor was evident everywhere, nowhere more so than when they had to enter public places and Threll acknowledged the city dwellers. No one smiled, no one seemed pleased to see the

High Minister—everyone fixed him with a cold, threatening stare that didn't drop until they had passed out of sight.

The Doctor was starting to get very worried and concerned for his friend's safety. He had seen this sort of situation many times before—whenever people's lives were threatened their feeling of helplessness usually turned to one of anger and resentment towards their leaders. Although he didn't make his feelings known, the Doctor believed that if he and Threll did not replenish the food supply soon the people would violently rebel—and Threll and his supporters would be the very first victims!

The Doctor heaved a sigh of relief when they finally arrived in Threll's chambers and he had locked the door behind them. "We have very little time," he said.

The chart in Threll's study showed the grim statistics of Prime City's battle for survival. Over three thousand people had died or were critically ill due to starvation. Hundreds more had left the complex in a desperate search for food in the merciless desert above. But what drew the Doctor's attention more than anything was the number of guards and scientists who had died investigating the disappearing food—and particularly the way in which they had met their doom. Threll showed him some photographs of the bodies: each one showed a horribly burnt corpse.

"Caused by an instantaneous, mammoth electrical charge," the Doctor said, replacing the photos on the table.

"From what? A gun?" said Tegan.

"No weapon could store and discharge that amount of energy all at once."

"Then you think something else caused it! What?" Threll demanded.

In reply, the Doctor took from his pocket a strange black object, round, and about the size of a tennis ball, and gave it to Threll. It was soft to touch, yielding under finger pressure. "I found that on the surface," the Doctor said.

Threll shuddered at the feel of the thing. "It feels alive!"

"It is—it is one of the killers of your men."

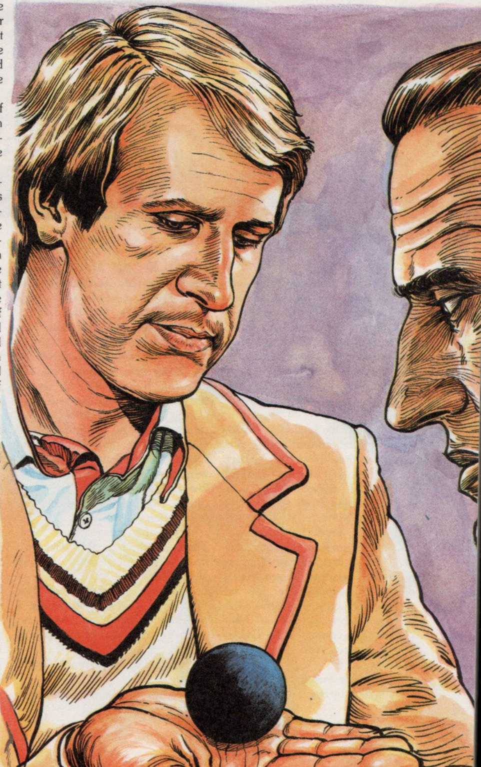
Threll stared at the Doctor, then back at the thing. "This?" he said incredulously.

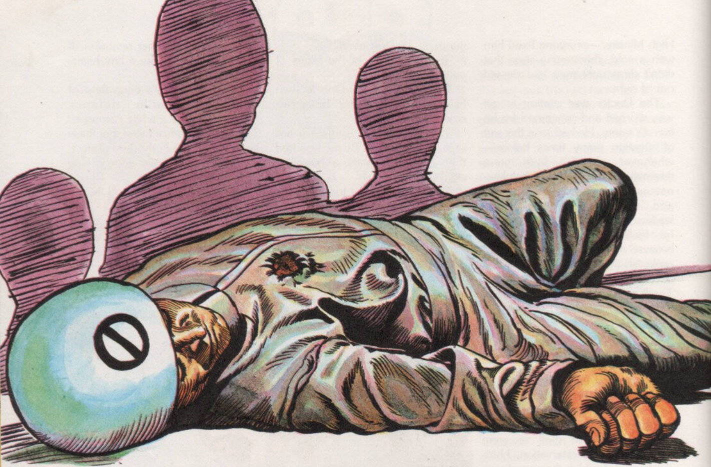
"Not on its own. By itself it has only limited power. By the hundred they could devastate a complete city."

Tegan moved over to look at the thing, overcoming her revulsion. It was pulsing now, like a tiny heart. "What is it?"

"Another galaxy's equivalent of our own bodily defence mechanism, like a white corpuscle. The only difference being that these live **outside** the body they protect, stopping any dangers approaching their host."

Threll was taken aback. "Like my





men," he said grimly.

The Doctor nodded. "Whatever they are protecting down in the production plants is not a threat to you —**you** are a threat to it."

"A being from another galaxy! I never dreamed…" Threll trailed off. "But it steals food, Doctor! That must be a hostile action—the people of this city had every right to go after it!"

"Not until they knew the reason why it needs the food!" the Doctor retorted angrily. He had a respect for all alien life forms and loathed unnecessary violence. "Did your men ever think of investigating before they blundered down armed to the teeth, Threll?"

Threll slumped, shaking his head. "After the first injury—I suppose that was just a warning—I delegated responsibility to the security forces; it seemed like a job for them after all that had happened. I was wrong." Threll looked at the Doctor: "I've disappointed you, haven't I?"

The Doctor smiled. "I've made a few mistakes by being too busy elsewhere," he said. To his mind Threll's fault was already forgotten. "All we have to do now is stop any further incidents, and then try to communicate with whatever has such a large appetite down there."

Threll resumed his air of authority. There was no time now for reflection. It was a time for urgent action. Sitting behind his desk, and placing the alien ball on it, he switched on his communicator. "This is High Minister Threll. Attention all security forces. You are to withdraw immediately from the lower levels, pending further orders. No further hostile action is to be taken…"

When the mesage was over, Threll stood up again. "Did you know what we were dealing with all along, Doctor?"

The Doctor shook his head. "Not until I'd seen the photographs. I couldn't be sure—but there's no mistaking the cause of that type of death."

"So what do we do now?" Tegan asked.

"We'll go and pay our alien friend a visit," the Doctor replied nonchalantly.

But the Doctor and his companions never reached the door. They halted when a loud voice boomed through the door's identification speaker. "This is Chief Guard Sholl. Open up, Threll!"

The tone of the chief guard's voice itself was enough to strike an ominous chord in the Doctor and the others—but what made it worse was the lack of the term High Minister in his address of Threll. All of them knew that something was very wrong. Threll glared at the Doctor: in the past few days he had been getting increasingly tired of the increasing number of menials who, because of the crisis, thought they could supersede his authority.

Threll stormed to the door and flung it wide open. The three of them were faced with Sholl and two other guards staring hostilely in at them, and something else: the body of one of Threll's loyal personal guards lay across the corridor, a blaster hole horribly evident in his chest. The Doctor knew then that his fears had been realised. Due to misplaced beliefs and fear, the people of Prime City had revolted. It was rebellion. He and the others backed into the room.

"You are under arrest," Sholl said, calmly.

"Why, Sholl? Why?" protested Threll. He too had recognised the danger signs of rebellion and at any other time he could have accepted it—but not now! Not at such a crucial time!

Sholl reeled off a list of 'charges' in a tone of voice rather like a judge uses when pronouncing sentence of death. "You are under suspicion of harbouring people responsible for the food crisis. You are accused of dereliction of duty, the hoarding of food supplies, and of relating orders detrimental to the safety of the city."

"The cessation of hostilities?" Threll said. "Sholl, you do not know why I issued that order... there is something in the production plants that must not die!"

Sholl was not listening. "The sentence for these charges," he continued, "is immediate death."

"No, you fool!"

Sholl and the other guards unholstered their weapons. As they did so, the alien ball flew from the desk at high speed, zipping through the air like an insect. Before any of the guards had realised what was happening, it had touched each one of them, and where it touched there was a bright spark of electrical energy. Almost as one, the guards crumpled to the floor while the ball hovered above them, making sure they did not move.

Without hesitation, Threll disarmed them while the Doctor made a quick examination. "Not dead," he said, "but they're completely immobilised."

"The ball helped us!" Tegan cried.

"It protected itself against danger," the Doctor corrected, "following its natural instinct."

"I think it knows we're trying to help its host," insisted Tegan.

"We have no time to discuss its relative intelligence now," interrupted Threll. "We are still in danger. The rebellion has obviously gone too far to stop."

It was obvious he was right. From down the corridors in every direction came the sound of blaster fire and human cries as those for and against Threll battled for a desperate solution.

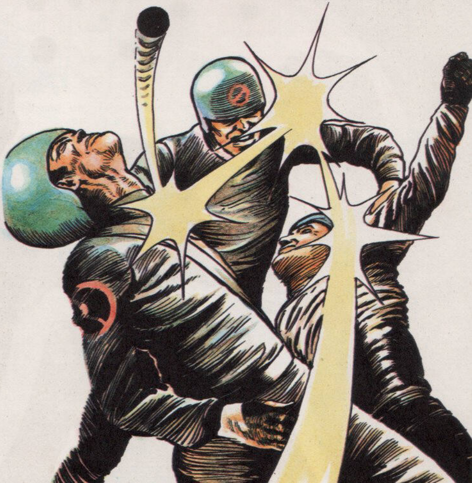
"We have to reach the production plants before they launch an all-out attack!" the Doctor cried. "Come on!" With the fate of Prime City now in the hands of the Time Lord, Threll and Tegan armed themselves and followed him out of the door. Seconds later, it appeared that Tegan's instincts were correct, as the alien ball whizzed out after them to provide an aerial defence.

The trio and their alien ally proceeded through the corridors to the lower levels in relative safety. Most of the people they came across—despite their respective loyalties—were hesitant to attack the man who was their High Minister. The very few who did attempt an attack were struck down either by the ball's energy bolts or by the expert marksmanship of Threll and his neuro-paralysis darts. Very soon, the group had dropped down to level nine by an elevator and were standing before the seals of the production plants.

It was silent this far down in the bowels of the complex. Any movement the Doctor or the others made echoed along the metal chambers. Threll observed that the quiet would at least give them the advantage of being able to hear the rebels approach long before they arrived.

"The food shipments disappear at this point, Doctor," Threll said. "Whatever is responsible is beyond that door."

Slowly, the Doctor pressed his palm against the seal mechanism. With a hiss, the door started to slide back into the wall. Before it had opened six inches, the alien ball flew through and vanished into the darkness beyond. The atmosphere was more ominous than ever.



Showing the courage that had made him a friend of the Doctor's, Threll unhesitatingly slipped through the door, activating a light control on the other side. The plant beyond exploded into brilliance. After taking a moment to adjust to the light, the trio peered in. Other than the food processing machinery there was nothing.

"The food distribution section is this way," Threll said, leading the group across the plant floor. All ears were primed for the slightest sound. Tegan repeatedly gulped nervously.

The chamber which housed the machinery was immense, and it took a good few minutes to cross it, but all of them were without incident. Then the room narrowed to a tunnel and suddenly there was a flurry of activity. Alien balls appeared from every crevice and took up a floating position in front of the group, blocking movement into the passage beyond. There was no doubt now that at the end of the passage they would find the creature. Tegan stared at the balls, afraid to move.

"Do you think they'll attack?"

"Not unless we do," the Doctor reassured her, even though he was unsure of why they had taken an effective attack position. Then he realised. "Drop your weapons," he said.

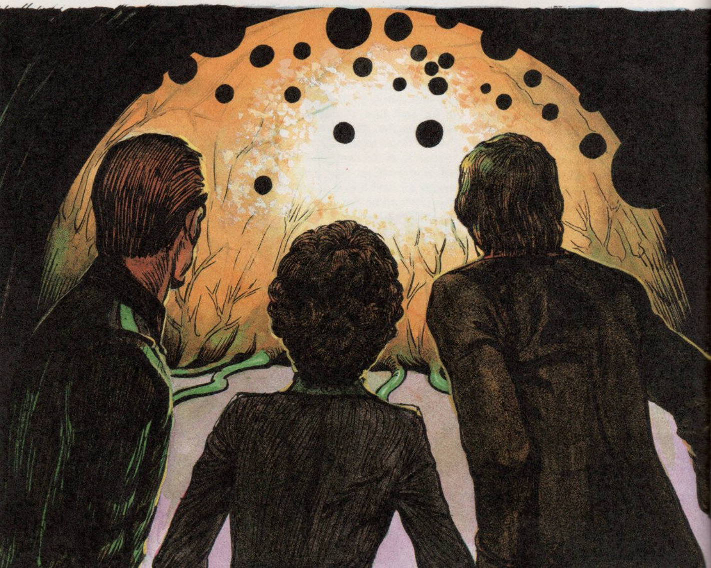
"Is that wise?" Tegan objected.

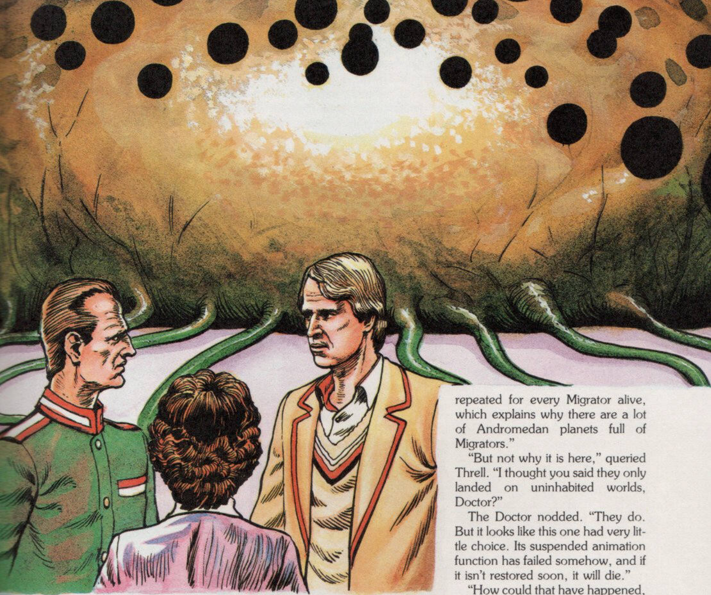
"A good many of Threll's security team are now burnt-out husks because they didn't think it wise!" he hissed.

The weapons were dropped. The balls dissipated, allowing an unhindered progress. It was at times like this that Tegan wished she had never blundered into the Tardis and met the Doctor. The moment of truth was approaching. The trio began to move down the corridor.

Strange sounds echoed out of the chamber at the far end of the passage, getting louder the nearer the Doctor and the others approached. None of them could say that the noise sounded very welcoming—it was a seething, hissing gurgle. Tegan pictured nightmare creatures in her mind. One of them was not very far from the truth...

The creature occupied most of the large food distribution chamber. It was amoeba-like, almost like a gigantic human cell in appearance, and its flesh undulated and rolled like slow-motion waves, sending green tendrils snaking across the floor; tendrils that enveloped cases of Prime City food supplies and drew them back to the main body, which absorbed them. It had devoured most of the food in the chamber.





Unlike Tegan and Threll, the Doctor seemed unperturbed at the sight of the creature. Cautiously, he moved forward into the chamber, wary in case any sudden move brought the balls down in attack. Nodding to himself, he reached the edge of the creature and bent to examine it in more detail. The sluggish, liquid flesh of the creature actually contained thousands of rough, ovular shapes, each about the size of a large man's fist. The Doctor prodded and poked around at these until finally he straightened up, a gleam in his eyes. "This must be the first time a Migrator has ventured out of the Andromeda galaxy," he said, awed, and obviously pleased at the revelation. He motioned to Tegan and Threll. "Come closer, it won't hurt you."

Moving up, Tegan asked uneasily: "Doctor, what's a Migrator?"

"Just what it sounds like," he answered cryptically. "Migrator being both a noun and verb. They exist to migrate, they migrate to exist." The Doctor could sometimes get carried away with himself but eventually Tegan managed to prise an explanation out of him. "When a Migrator reaches maturity, it gives birth to countless baby Migrators. In order that each infant has a good chance of survival, though, the birth has to take place on a planet that allows plenty of freedom and space, which no planet on which other Migrators live does. Therefore, placing itself in a state of frozen animation, the Migrator travels to another uninhabited world, where the birth takes place. That process is repeated for every Migrator alive, which explains why there are a lot of Andromedan planets full of Migrators."

"But not why it is here," queried Threll. "I thought you said they only landed on uninhabited worlds, Doctor?"

The Doctor nodded. "They do. But it looks like this one had very little choice. Its suspended animation function has failed somehow, and if it isn't restored soon, it will die."

"How could that have happened, Doctor?"

"Probably by journeying too close to Aronassus 49's binary suns. Their intense heat must have caused a temporary temperature inversion, sending the Migrator into shock."

"It must have landed in the desert and somehow made its way into the lower levels for protection. But how? And more importantly, how do we get it out again?" Tegan asked.

The Doctor thought for a moment. "Threll, isn't there an access shaft that leads from these chambers to the surface?"

"Why, yes. But they have not been used since the construction of Prime City. They emerge somewhere near the foothills of Arola. Are you suggesting that the shafts were the Migrator's mode of entrance?"

Nodding, the Doctor started to move off across the chamber. "And it will be **my** mode of exit."

"Where are you going?" Threll asked, shocked.

The Doctor called back, "To get the Tardis. We have a hitch-hiker in desperate need of a lift." Still walking, he pointed over his shoulder at the Migrator. "Look after her until I get back!" he cried.

"I hope he hurries," said Threll. "The rebels could be down here any minute now. At odds of about a million to two, I don't think we'll have much of a chance."

"And if **they** don't hurry," Tegan responded, "there will be very little food left to save." She indicated yet another crate of supplies vanishing into the body of the Migrator.

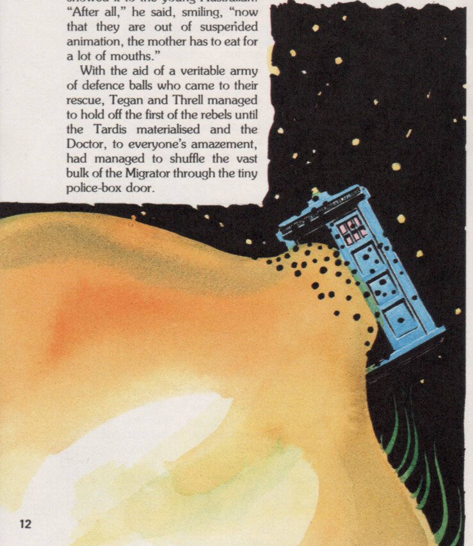
"She needs it, Tegan." Threll pulled one of the ovular shapes out from the Migrator's flesh and showed it to the young Australian. "After all," he said, smiling, "now that they are out of suspended animation, the mother has to eat for a lot of mouths."

With the aid of a veritable army of defence balls who came to their rescue, Tegan and Threll managed to hold off the first of the rebels until the Tardis materialised and the Doctor, to everyone's amazement, had managed to shuffle the vast bulk of the Migrator through the tiny police-box door.

Held in check by a line of hovering defence balls primed to strike at one wrong move, the attackers watched silently, each of them gradually feeling their fight drain away as the 'threat' was removed from the food distribution chamber. Finally, they sagged to the ground, feeling only hunger. The die-hards such as chief guard Sholl, who demanded they continued fighting, were shouted down.

When he was ready, the Doctor called Tegan and Threll into the time and space vessel, where they met a bewildered Nyssa, crushed up against a wall by a somewhat cramped Migrator. Threll could see that the Migrator's bulk had oozed through other doors and was probably enveloping a goodly portion of the maze-like Tardis corridors.

Closing the outer doors, the Doctor paused to let the defence balls zip in, and then slammed the door to keep out Prime City inhabitants. Nyssa operated the screen and everyone could see the people mingling around the ship and then finally turning away and heading for what little food there was left until the food processors were restarted. The Doctor moved to the control column and flicked some switches, which started pumping the central unit up and down. "Next stop, deep space," he said.



After first ensuring that he and the others were safely locked in an airlock off the main control room, the Doctor ejected the Migrator into space, where it recommenced its journey, settling back into a state of suspended animation. When control room pressure was restored, the group emerged and Tegan made a point of watching the Migrator on the screen until it faded in the distance. One or two defence balls flew around outside and then they too were gone, following their host into infinity.

Threll smiled in relief and gratitude. "My friend, I do not know how to thank you."

"Well," the Doctor said, grinning, "after what we've been through, I feel like a celebration. And as Aronassus 49 is the closest..."

"So soon after the crisis?" Threll questioned. "Such an action may not be considered fitting." He looked at the Time Lord, shocked that he should make such a suggestion.

"I agree... I agree," the Doctor said, nodding eagerly and grinning. "That's why being a Time Lord comes in so handy sometimes." He started adjusting dials on the time console. "How about if we materialised three days after today? Or perhaps a week would be better..."

"I think that by that time," Tegan observed, "your people should be glad to see you." She smiled. "I'm looking forward to your reinstatement as High Minister."

"And I," said the Doctor, "am looking forward to a really good meal."

Our Neighbours in Space

When you look up into the sky on a starry night, it might seem as though we have thousands of neighbours in space. And of course we do. But the immense distances of those stars from us make them not quite the kind of neighbours to whom you'd pop round for a cup of tea!

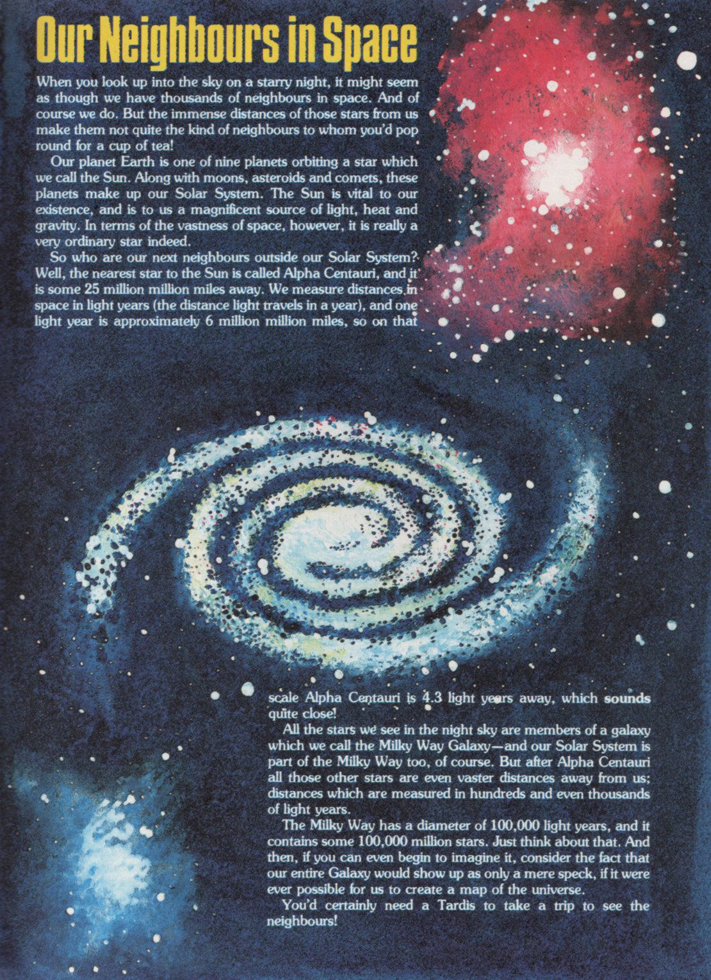
Our planet Earth is one of nine planets orbiting a star which we call the Sun. Along with moons, asteroids and comets, these planets make up our Solar System. The Sun is vital to our existence, and is to us a magnificent source of light, heat and gravity. In terms of the vastness of space, however, it is really a very ordinary star indeed.

So who are our next neighbours outside our Solar System? Well, the nearest star to the Sun is called Alpha Centauri, and it is some 25 million million miles away. We measure distances in space in light years (the distance light travels in a year), and one light year is approximately 6 million million miles, so on that scale Alpha Centauri is 4.3 light years away, which **sounds** quite close!

All the stars we see in the night sky are members of a galaxy which we call the Milky Way Galaxy—and our Solar System is part of the Milky Way too, of course. But after Alpha Centauri all those other stars are even vaster distances away from us; distances which are measured in hundreds and even thousands of light years.

The Milky Way has a diameter of 100,000 light years, and it contains some 100,000 million stars. Just think about that. And then, if you can even begin to imagine it, consider the fact that our entire Galaxy would show up as only a mere speck, if it were ever possible for us to create a map of the universe.

You'd certainly need a Tardis to take a trip to see the neighbours!



BEHIND THE SCENES AT DOCTOR WHO

THE VISUAL EFFECTS DEPARTMENT

The Tardis, the guns and spaceships which appear in the course of the Doctor's adventures—have you ever wondered where they come from or if you can buy them in the shops? They have all been specially designed and built for the programmes by the Visual Effects department of the BBC and only a few of the better known ones can be bought.

Simon Macdonald is one of the designers involved with the effects side of *Doctor Who* and he describes how, from the basis of a script, some of the marvellous effects come to the screen.

"The scripts arrive from the Production office and have to be carefully read so that I have a clear idea of the effects the script demands. This may range from the brief reference to a handgun to a box of tricks which blow up or an elaborate sequence of shots of spaceships.

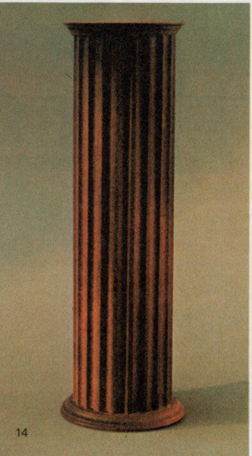
"Then it's down to the drawing board and putting some of the ideas and designs on paper to show the director."

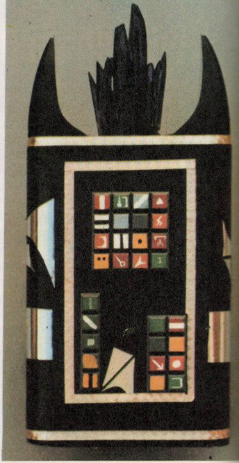
A few days after the scripts come in Simon goes, with his drawings, to the first of several planning meetings where he will meet the producer, director and the designers of the costumes and sets. The designs are discussed and the immediately obvious technical problems are worked out. "Many effects require the assistance of other departments so that it is extremely important to know at this early stage what sort of problems we may run up against, and how they will be overcome. For instance there may be a scene of an actor falling through a glass window. We would need to know the specific details of the size and design from the set designer and then construct the window so that there would be no risk of injury to the actor. When it comes to pyrotechnics in the studio or on location close liaison with the director is essential; the proximity of the actors to the effect as well as the positioning of the cameras so that what appears on the screen as dramatic action— walls collapsing, electronic panel short-circuiting and blowing up—are all achieved with the maximum safeguards.

"The work in the Visual Effects department is very varied and never boring. We don't have the time! It really is a different job, with problems to solve every day. We make all our own model spaceships, some of which are very complicated constructions with radio-controlled moving parts and are quite a lot larger than the kits you can buy in the shops. Also on space programmes such as *Doctor Who* we can quite often be involved in the design and construction of monsters and robots such as the Terileptils in *The Visitation.*

"A lot of our work is destroyed in the course of filming, which either means we have to make duplicates in case there is more than one take, or if the effect is, for example, a spaceship blowing up, we make certain that every eventuality is covered and then keep our fingers crossed. Often we would film a large explosion with more than one camera and at different speeds so that the director has the choice of what footage to use."

The Master's Tardis.





The Master's remote control device.

The sci-fi shows *Doctor Who*, *Blake's Seven* and *The Hitch Hiker's Guide to the Galaxy* provide the bulk of the work for the Visual Effects department while the comedy series such as *Little and Large* and *The Two Ronnies* make quite heavy demands on the effects side.

"Not all our work is immediately appreciated because it involves creating atmospheres and as such is taken for granted by the viewers."

How do you create a monsoon if you are filming in England or for that matter a pea-soup fog or snow?

"We try to beat nature at her own game and quite often lose. We could lay snow in for a day's filming and find we have a downpour, or try to create mist in a force 8 gale. Compromises have to be made so that the best effect can be achieved from such adverse conditions."

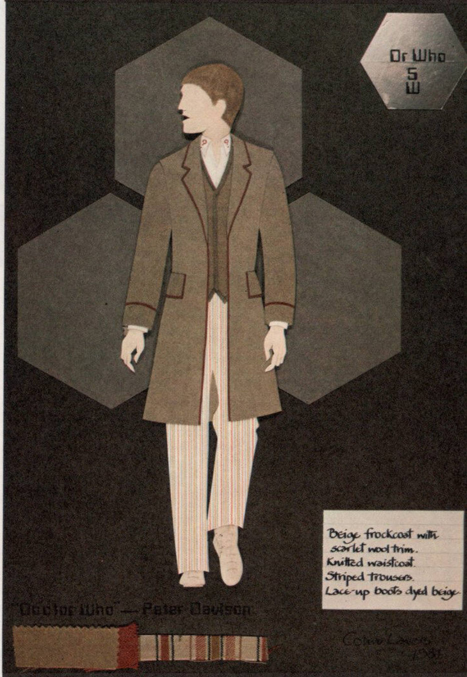
The Visual Effects department is big and lively. Simon is one of eighteen designers and there are about twenty-five assistants. It is the largest department of its kind in Europe and it services all the BBC requirements. Many of the designers and assistants come into the BBC and this line of work with Art College training frequently in Industrial, Interior and Stage design. The practical emphasis is all important because they are expected to be able to weld, cast in fibreglass, as well as have a basic knowledge of electronics and chemistry.

"That doesn't exclude school leavers. I think that anyone who can demonstrate a real interest and aptitude would be seriously considered. Technology is moving at such a pace that it is often the school-leaving generation who have their finger on the pulse where we may be working with relatively out-moded methods."

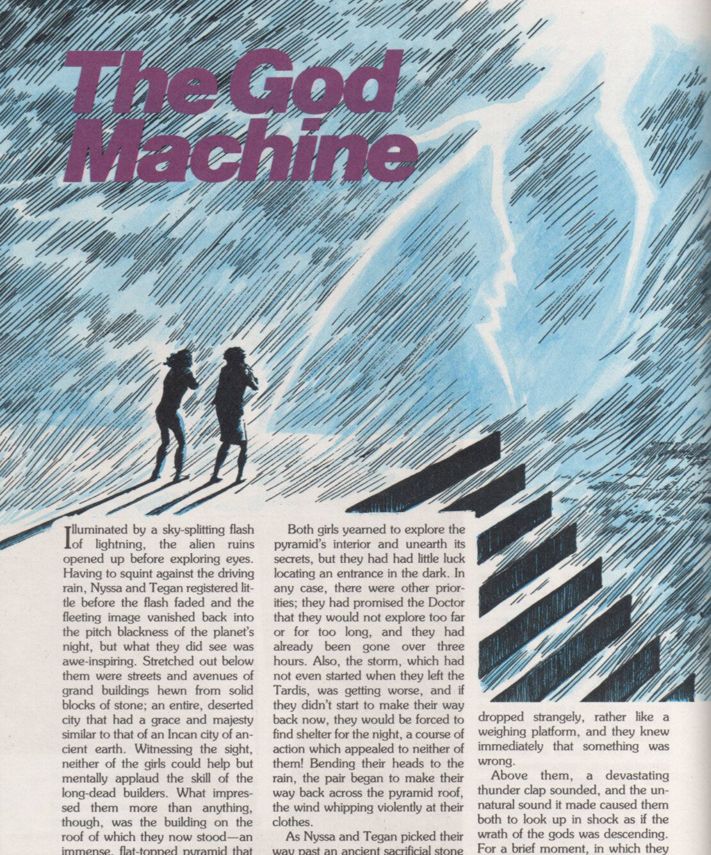
So if you have a radio-controlled Frankenstein under your belt, the BBC could well be the place for you. Where else could you find yourself working behind the scenes helping the Doctor in his adventures?

ENTER PETER DAVISON AS DOCTOR WHO

Dr Who, as played by Peter Davison; costume designed by Colin Lavers. The 'new' look consists of a beige frockcoat with scarlet wool trim, knitted waistcoat, striped trousers and lace-up beige boots.


Dr Who
5
W
Beige frockcoat with scarlet wool trim.
Knitted waistcoat.
Striped trousers.
Lace-up boots dyed beige.
"Doctor Who" — Peter Davison
Colin Lavers

The God Machine



Illuminated by a sky-splitting flash of lightning, the alien ruins opened up before exploring eyes. Having to squint against the driving rain, Nyssa and Tegan registered little before the flash faded and the fleeting image vanished back into the pitch blackness of the planet's night, but what they did see was awe-inspiring. Stretched out below them were streets and avenues of grand buildings hewn from solid blocks of stone; an entire, deserted city that had a grace and majesty similar to that of an Incan city of ancient earth. Witnessing the sight, neither of the girls could help but mentally applaud the skill of the long-dead builders. What impressed them more than anything, though, was the building on the roof of which they now stood—an immense, flat-topped pyramid that dwarfed the rest of the ruins and which, at one time, must have been a temple or hall of worship to some alien deity.

Both girls yearned to explore the pyramid's interior and unearth its secrets, but they had had little luck locating an entrance in the dark. In any case, there were other priorities; they had promised the Doctor that they would not explore too far or for too long, and they had already been gone over three hours. Also, the storm, which had not even started when they left the Tardis, was getting worse, and if they didn't start to make their way back now, they would be forced to find shelter for the night, a course of action which appealed to neither of them! Bending their heads to the rain, the pair began to make their way back across the pyramid roof, the wind whipping violently at their clothes.

As Nyssa and Tegan picked their way past an ancient sacrificial stone that dripped with rain, they suddenly felt their feet sink beneath them. Looking down, they saw that the stone on which they stood had dropped strangely, rather like a weighing platform, and they knew immediately that something was wrong.

Above them, a devastating thunder clap sounded, and the unnatural sound it made caused them both to look up in shock as if the wrath of the gods was descending. For a brief moment, in which they realised with horror that they must have triggered something, the girls felt frozen in time, and then they knew nothing more.

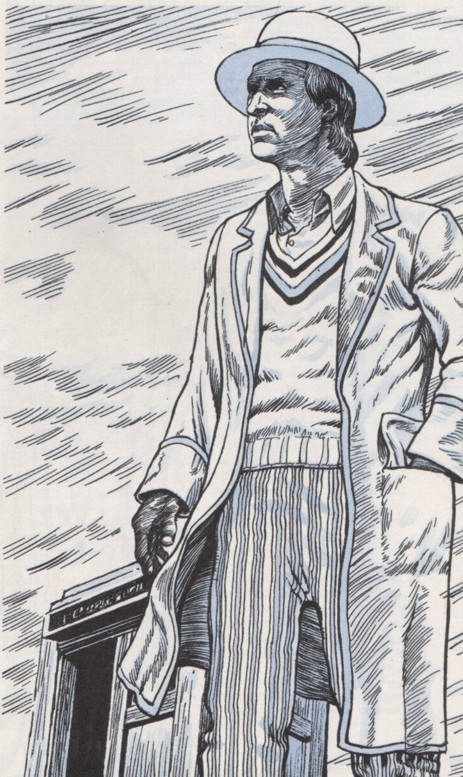
A stark and brilliant blue light appeared over the roof of the temple, enveloping everything and, when it dissipated a few moments later, Nyssa and Tegan were gone! Only the temple itself remained, dark and foreboding, the heavy dashes of rain splattering on its bare stones...

The Doctor pressed a button and the Tardis door swung open, letting early morning sunlight stream into the ship. Stepping outside, onto grass still soaking from the previous night's storm, the Doctor noted with relief that the exterior of the Tardis showed no signs of damage. The time-and-space disturbance that had forced him to land the Tardis on this small planet had been severe, but not severely harmful, and the few interior repairs necessary had now been effected. When Nyssa and Tegan returned from their curiosity-aroused exploration, a potentially dangerous habit he would have to steer them away from, the Doctor reminded himself, they could resume travelling.

The Doctor checked the Tardis chronometer and noted that the girls were long overdue. Hoping to catch a glimpse of the returning duo, the Doctor mounted a small rise near to the Tardis and looked out over the surrounding countryside. In the distance he could see the shapes of a large city, but of Nyssa and Tegan themselves there was no sign. Concerned, the Doctor turned and strode back to the Tardis.

Two hours later, the Doctor stood at the end of an avenue leading into the deserted city. Nyssa and Tegan had not returned, and the Doctor had set out to find them, choosing the city as the most logical place to start.

The Doctor began a thorough search of the ruined city, moving from doorway to doorway, building to building, intent on covering as much ground as he could. After exploring seven avenues he stopped, tired and puzzled. There was no sign of life anywhere, and nothing to shed light on his companions' inexplicable disappearance! The Doctor knew that he could not search the entire city alone—and he did not intend to try—but, before he returned to the Tardis to rethink the situation, there was one more place he wanted to investigate: the giant, central pyramid that dominated the city. He was about to move off when he froze—he had heard a sound! Quietly and quickly, the Doctor ducked into a doorway and listened intently. There was no mistaking what the sound was—it was a chanting, and one that was moving closer. There were other people in the city! Cautiously, the Doctor began to make his way in the direction from which the sound was coming.



Hundreds of people walked slowly down the widest avenue in the city towards the imposing pyramid at its end. Most moved in orderly silence but, in the middle of them all, women and children danced and ran around a large laden platform carried by six burly men. The Doctor judged the gathering to be some form of religious procession, and the sombre, respectful mood of those who were leading it seemed to add confirmation. But what exactly these people were doing here puzzled the Doctor. From their appearance and dress, he knew they were natives of the planet—but according to the Tardis's records of the planet, the natives had abandoned this city long ago! The Doctor frowned. Why had they returned? Were they responsible for the missing girls? The Doctor studied the natives' peaceful and gentle faces and dismissed the thought. The Tardis's records had described the natives as harmless. Hoping that the information was correct, the Doctor stepped out into the open.

With a wave of a hand from the leader, the chanting and the procession drew to a halt. Curious eyes turned on the Doctor. Silence and stillness hung in the air, then the leader, an old man, walked over to the Doctor. "You are a stranger," he said, smiling. "I am Sorl, of the North tribe."

The first thing that the Doctor thought when he regained consciousness was, so much for the Tardis's records. Harmless natives! He could still feel the lump from the single blow from a club that had knocked him to the ground! The Doctor took stock of his surroundings. He had been placed in one of the domiciles he had searched earlier, a small, dark and dusty room empty apart from a rotting curtain which hung over an open entrance and... a young girl crouched in a corner watching him! The Doctor sat up.

"They did not really want to hurt you," the girl said. "They left me here to look after you... and to make sure you do not interfere."

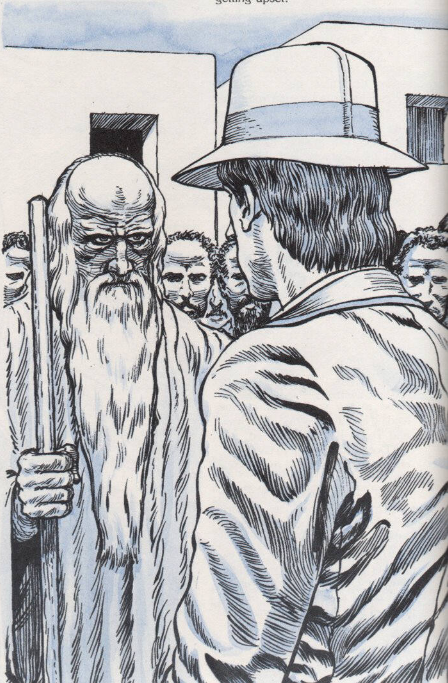
The Doctor rubbed his head and looked at the girl. She was no more than sixteen years old—a primitive probably more wary of him than he was of her. "Interfere?" he questioned.

"In the ritual of gratitude—to Vi'Al, our god."

Vi'Al! The Doctor remembered what the Tardis's records had told him. Vi'Al, the ancient god of life. But he was a deity supposedly abandoned and forgotten by the natives hundreds of years ago! Why, then, had they returned to worship him? he asked.

"We had abandoned the city many cycles ago to search for new prosperity and life. Gradually, our people learned to forget Vi'Al..." Just like the old people of earth had ceased to believe in many ancient gods that existed only through ignorance and superstition, the Doctor thought. "...And we found other, truer beliefs. But one day my father returned to camp; he had been to the city. He told the elders that Vi'Al had returned!"

"How did he know?" the Doctor prompted, seeing that the girl was getting upset.



"Vi'Al had spoken to him! The next day we went into the city, hundreds of us, and we saw for ourselves. Vi'Al had returned to the temple of life!" The girl began to cry. "But he was not the Vi'Al of the legends! He demanded sacrifices, tributes... he took some of our people into the temple! He sent a great light to claim them!"

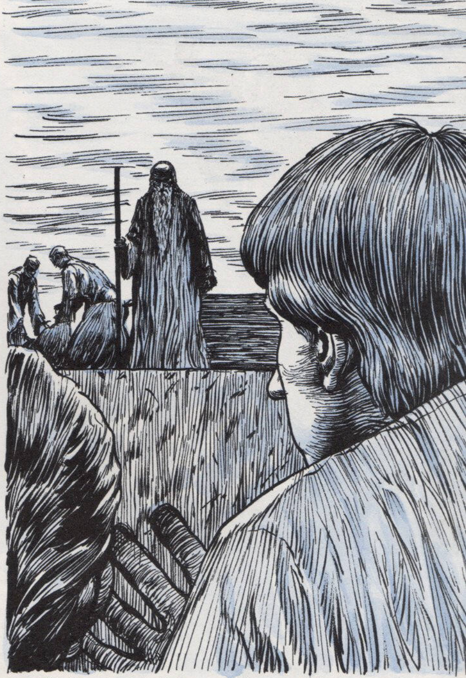
"Has this Vi'Al ever shown himself?" asked the Doctor.

"No one who has since looked upon his face has lived! Now do you understand why elder Sorl had to stop you from interfering! Vi'Al would punish us all!"

The Doctor frowned. This large departure from what he knew of the god was too much to accept. Something was wrong. Gods that had never really existed did not return for tribute. They did not demand sacrifices and take them into the temple. Suddenly, it all fell into place. **Into the temple.** The Doctor knew that that was where he would find Nyssa and Tegan! "I need your help," he said to the girl.

The Doctor moved stealthily toward the central pyramid. After a little persuasion, the girl had agreed to help him find his friends, never actually having believed in the new Vi'Al. In return, the Doctor had agreed to expose whatever trick was being used to misguide the natives and had enlisted the help of three of the girl's friends to guide him into the temple. The three natives moved ahead of him now, ensuring that the coast was clear. Looking up, the Doctor saw that the sky was darkening for night, and realised that he had been unconscious most of the day. The ritual of life would probably already have begun! If his plan was to work, he had to hurry!

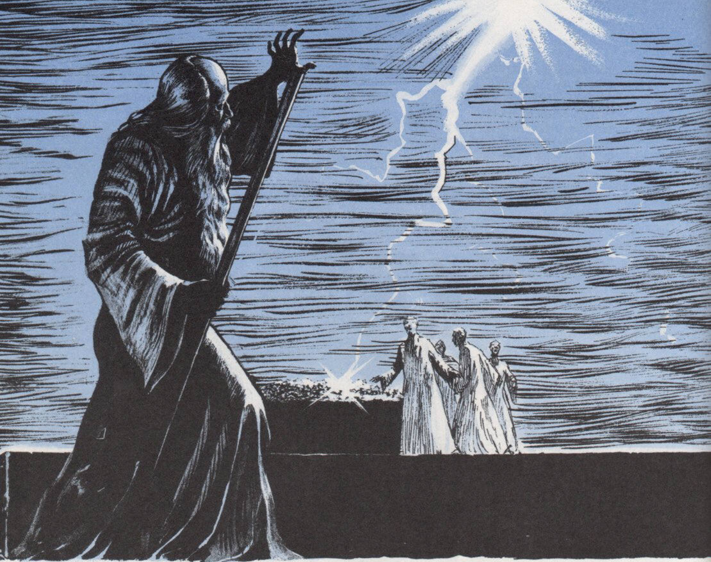
Peering around a corner, the Doctor and the natives saw that crowds had gathered along the base of the temple. They were all watching Sorl, and the men who had earlier been carrying the laden platform taking its cargo of tied sacks up the endless steps to the top of the temple. The sacks, the Doctor knew, were obviously their offering —or sacrifice—but what did they



contain? As he watched, the Doctor realised that he had little chance of reaching the temple in the clothes he was wearing as he would be recognised too quickly—but he had to reach it and get inside! Indicating his need to the natives, he watched as they scanned the rear of the crowd and moved off towards a man who stood alone. The natives surrounded the man and, when no one was watching, knocked him unconscious then dragged him into a nearby dwelling. The Doctor followed and had soon slipped the loose-fitting garment over his own clothes.

With in seconds, they had moved back into the crowd and begun to work their way casually toward the temple steps.

The Doctor and the natives found no difficulty in getting most of the way to the top of the temple, as the crowd had surged upward, desperate to get a good view of the proceedings. But eventually the crowd thinned out and the Doctor was forced to crouch on the steps, afraid of being recognised by Sorl, who stood mere feet away on the roof. Secure in his position, the Doctor settled himself down and watched.



Sorl and the natives had started to tip out the contents of the sacks onto the sacrificial stone. As the Doctor watched, hoards of glinting, sparkling gem-stones spilled out, drowning the stone in wealth. The Doctor stared in disbelief. So that was it! The planet was a veritable storehouse of natural treasures! For the first time, the Doctor began to get an inkling of what was going on. Whoever was tricking the natives into believing that Vi'Al had returned had devised a perfect system, demanding the sacrifice of gems that would be worthless to the natives, but worth a fortune elsewhere in the galaxy! The false god Vi'Al was going to be a very rich man!

When Sorl had finished tipping the gem-stones onto the temple stone, the other natives backed off, leaving the old man alone on the roof. Aware that the sacrifice was about to begin, the crowd grew silent and Sorl raised his arms to heaven. An ominous mood of expectancy descended.

"To Vi'Al," the old man shouted, "we give our offering!"

Sorl moved toward the sacrificial stone and placed his foot on a part of the roof that seemed to sink beneath it. Straining to see, the Doctor guessed that it was some form of trigger device and he tensed himself to run onto the roof. There were only seconds left, seconds before the Doctor planned to make himself part of the sacrifice and descend into the temple!

"To Vi'Al!" shouted the crowd in unison.

The Doctor began to run for the roof, followed by the three natives, their desire to end the reign of a false god over-riding their fear of the unknown. As he stepped from the roof, Sorl spotted the group's desperate dash and cried out, horror-stricken. "No! No man must remain when the skies roar!"

But it was too late. Even as the old man screamed, the Doctor and the natives had reached the sacrificial stone. Overhead, a devastating roll of thunder ripped the skies. A stark and brilliant blue light enveloped the temple!

The Doctor felt his nerve-endings tingle with the after-effect of a teleport beam. Beside him, the three natives stood bemused, wondering what magic had taken them. The night, the crowd and Sorl had gone. They were inside the temple!

The Doctor stepped from the teleport pad, wading through a mound of gems that would have paid a million kings' ransoms. Followed by the natives, the Doctor made his way through an open archway and into a sloping corridor; at least they had surprise on their side!

The corridor led down into the bowels of the pyramid and ended in a junction. Spotting something in the wall, the Doctor halted the natives and moved cautiously toward it. A small square stone was balanced in a niche between two larger blocks, and the Doctor recognised it as being a trigger for a booby-trap!

He remembered tales of how the pyramid builders of ancient Egypt had secreted such devices in their constructions to trap any grave-robbers or plunderers who dared to enter, and realised that the slightest inadvertent movement could set them off, bringing giant slabs of stone crashing down on the unfortunates. If, he pondered, the pyramid in which he now stood contained more of these booby-traps, they would have to tread very carefully! Whoever was hiding in the temple and tricking the natives had been very lucky to survive this long!

Although the temple interior seemed to stretch on for ever, it was actually quite small, the corridors creating an illusion of size by winding back and forth across themselves in maze-like confusion, and it did not take long for the Doctor and the natives to find what they were looking for.

As they came to another junction they froze, hearing voices from a small chamber on their left. Peering in, they saw five men sitting around a table, laughing and joking. Each man wore the odd and colourful garb of intergalactic pirates, and each man carried a laser blaster strung around his waist. These men were the false god Vi'Al!

"Doctor!" whispered a voice urgently.

The Doctor and the natives turned. In a barred room across the corridor was a cell containing Nyssa, Tegan and about ten other natives! The group moved over to it, quietly exchanging greetings. The natives who had helped the Doctor seemed overjoyed to be reunited with their fellows, who they had assumed dead!

"Doctor, get us out of here!" hissed Tegan.

The Doctor shushed Tegan, aware that the slightest noise could alert the pirates, and began to examine the cell lock. He took a piece of wire from his pocket and began to probe.

The Doctor opened the lock within seconds, and the captives filed out quietly. But as one of the natives exited, he accidentally kicked something on the floor, sending it clattering down the corridor! In the chamber across the corridor, the pirates leapt up, their guns ready to fire. The Doctor reacted with shock; he knew that against five blasters they had little chance.

"Go now, Doctor! Take your friends!" ordered one of the natives.

The Doctor hesitated, not wanting to leave the men who had helped him get into the temple.

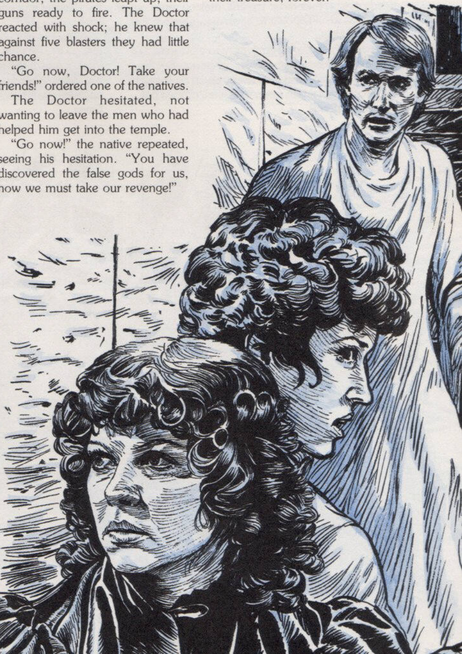
"Go now!" the native repeated, seeing his hesitation. "You have discovered the false gods for us, now we must take our revenge!"

With that, the Doctor knew he could not argue. It was now a matter of tribal honour. Grabbing Nyssa and Tegan, he wished the natives good luck and raced off up the corridor. Behind him, the sounds of battle began.

As he climbed a set of steps to the surface with Nyssa and Tegan, the Doctor heard the crashing of falling stone deep below him.

"What was that?" gasped Nyssa.

"Booby traps," answered the Doctor. The sound of crashing stone was followed by the victory cry of the natives, and he knew that they had taken their revenge. The pirates had been entombed with their treasure, forever!



COMING IN TO LAND

The Tardis doesn't need help to land precisely wherever – and whenever! – it wants. But have you wondered what goes on inside the air traffic control tower when an aeroplane comes in to land at a busy airport?

London's Heathrow Airport is one of the busiest in the world, with hundreds of planes landing and taking off every day of the week, and its control tower is at the hub of the whole operation.

Inside there is an air of total concentration, as the highly-skilled controllers sit before a battery of sophisticated and complex instruments. They keep a steady eye on their radar screens, making sense out of what to us would appear to be an incomprehensible pattern of blips.

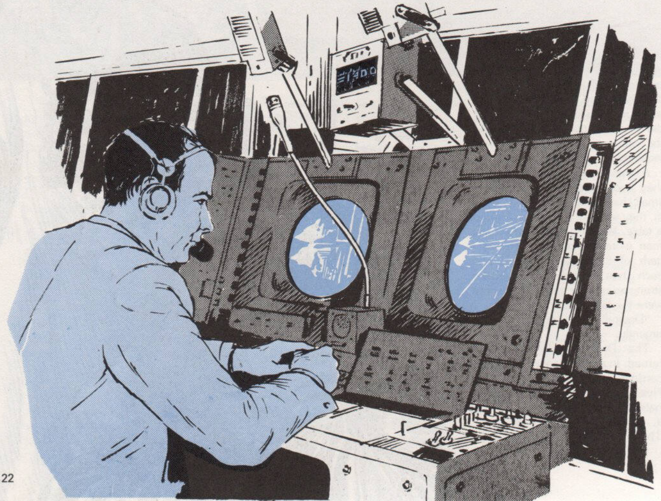
Each of these blips is equivalent to a planeload of people, and the responsibility is awesome. But the controllers take it all in their stride, and they speak to the aircraft captains in tones which are clipped but always courteous.

Each controller is responsible for his own particular area of the sky, which is called a sector. And at a busy airport like Heathrow many aircraft can be in the sector at one time, waiting to land.

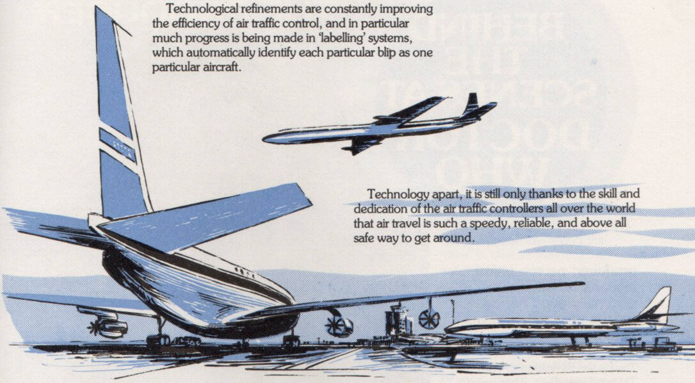
The controller directs each aircraft to its own particular circling pattern, which will be at a distance of 1,000 feet from the aircraft immediately above and below it. This is called 'stacking', and as soon as the runway is free the aircraft at the bottom of the spiral of stacked planes will be directed onto the 'let-down' pattern for approach and landing.

It can be a nerve-wracking experience for passengers to look out of their windows and see another aircraft apparently perilously close in the sky, but so long as all the captains obey the orders of the tower to the letter the stacking procedure will go smoothly and without a hitch.

As well as all the planes waiting to land, there will also be a great many waiting to take off, and it is the tower's responsibility to supervise the whole take-off procedure from the moment the aircraft starts its engines—which itself will be at the direction of the tower.



Technological refinements are constantly improving the efficiency of air traffic control, and in particular much progress is being made in 'labelling' systems, which automatically identify each particular blip as one particular aircraft.



Technology apart, it is still only thanks to the skill and dedication of the air traffic controllers all over the world that air travel is such a speedy, reliable, and above all safe way to get around.

What is a LIGHT YEAR?

The vast reaches of the universe span distances which it is impossible for us to comprehend. Billions upon billions of miles stretch from star to star, and scientists have to evolve a simple method of describing these immense distances.

The unit of measurement most frequently used is the light year, and one light year is the distance which light travels in a year. As it moves at slightly more than 186,000 miles per second, you can see that this is quite some distance!

Let's convert a light year into miles...

186,000 miles per second
× 60
11,160,000 miles per minute
× 60
669,600,000 miles per hour
× 24
16,070,400,000 miles per day
× 365
5,865,696,000,000 miles per year

BEHIND THE SCENES AT DOCTOR WHO

THE PRODUCER

John Nathan-Turner

producer: person ultimately responsible artistically, editorially and financially, for the production of a TV programme.

That's the definition of what a TV producer does. That word *production* means that the producer controls all aspects of a series or programme, from its conception and planning until it arrives on our TV screens. The producer's job is a very wide-ranging and demanding one.

The producer of *Dr Who* is John Nathan-Turner, who took on the job, his first as producer, after ten years with the BBC, working on series like *All Creatures Great and Small* and *Angels*.

So what does John's job entail?

His work on *Dr Who* starts months before filming even starts. Each *Dr Who* story has a different director and production team, and work on different stages of the stories may be going on at the same time; it's John's job to plan all this. To help, he has a large production schedule in his office, which looks something like an over-sized school timetable—it lets John know where everyone is and what they're doing!

When John took over as the producer he decided on a new 'look' for *Dr Who.* To create this new image he consulted costume designers and makeup artists and the all-important special effects designers. He had a new logo and titles sequence designed for the programme, and the BBC's Radiophonic Workshop produced a new theme tune. John's overall responsibility for the show's 'image' also means that he looks after press and magazine photo sessions, and takes a keen interest in the many *Dr Who* products on the market, ranging from books like this one to sweets and soap. He also devotes time to the two permanent *Dr Who* exhibitions at Blackpool and Longleat, and to the huge amounts of correspondence that pour into the BBC from the show's millions of fans.

Another part of the programme that has to be dealt with before filming starts is, of course, the scripts. John commissions professional writers to produce *Dr Who* scripts, but he also receives a lot of work submitted by amateurs. He's pleased to help and encourage amateurs if their work shows promise.

So, once the script has been decided on, the shooting timetable and budget worked out, the director and crew—and of course the cast—chosen, work can begin in earnest!

Filming may take place in the studio and/or outside on location, to meet the demands of the storyline. In the studio the various 'sets' needed for filming will be st up, each separate set in a different area of the huge studios.

Then rehearsals start. Rehearsals are valuable for both the actors *and* the technical crew: actors so that they know their lines and positions, cameramen, sound and lighting crews to find the best positions for shooting, lighting and sound recording.

When John is happy with things on the studio floor he moves up to one of the control rooms above the studio. Here everything that happens on the sets below is monitored; John watches the action on a small monitor screen that shows him exactly how the shots will look on TV. He can hear what's going on, thanks to microphones on the studio floor and loudspeakers in the control rooms. It's the director who actually controls what happens on the studio floor; John observes and discusses.

He'll talk to the Lighting Director and Sound Supervisor, too, to ensure that their areas of production are running well.

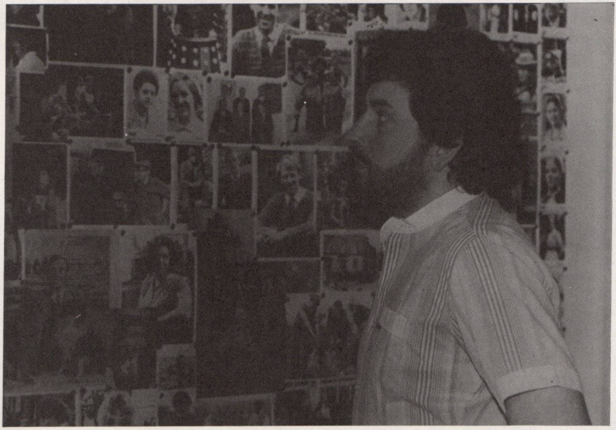
Filming outdoors on location is rather different, mainly because conditions cannot be so easily controlled. Again John supervises generally, making sure that actors and technical crew know exactly what they should be doing before filming starts. When everything is ready the director shouts, "Action!" the clapperboard snaps, and the cameras roll.

When recording is completed—and it can take hours to produce a few minutes of film—John's job still isn't finished. He and the director must edit the tapes down from the hours of film that have been shot, ensuring that the story flows well—and lasts *exactly* 24 minutes 30 seconds. Background music and other sound effects will also be added at this stage.

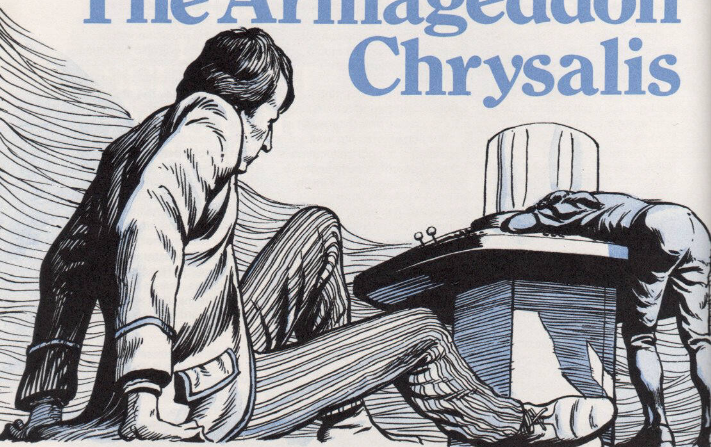
Only then is it time for John to sit back and enjoy the products of his work—until the next series, that is.

What is a clapperboard?
The clapperboard is held in front of the camera when shooting is about to begin. Details of what is being filmed are chalked onto the clapperboard, identifying the 'take' or shot so that it can be easily identified later when editing begins. The clapperboard also ensures, thanks to the 'clap' noise it makes, that sound and picture recording start at exactly the same time.

John with some momentoes of his TV work. The dog in the bottom left photograph is Pepsi, John's dog, who appeared in *All Creatures Great and Small*



The Armageddon Chrysalis



The Doctor was the first to awake, his head pounding as blood rushed into his brain, his limbs tingling as they twitched back into life. Where was he? What had happened? The Doctor took a deep breath and collected his thoughts. The Tardis. Of course, he was in the Tardis. But what had happened?

The Doctor picked himself up from the floor and looked around. The others were there! Nyssa, slumped forward over the console; Tegan, half-sitting, half-lying against the wall like a discarded rag doll.

The Doctor's brow furrowed in concentration, his mind clearing and beginning to assess the situation. The Tardis had been attacked, quickly and successfully, without warning. Something had cut them down as easily as if they were puppets whose strings had been severed.

Still dizzy, the Doctor moved over to the central console and studied the equipment, not liking what he saw. Inexplicably, shockingly, the console was dead, the time and space column still instead of pumping up and down as it should have been if they were still on course. The Doctor frowned, and for the first time noticed just how quiet the control room was. There was nothing to hear except the staggered breathing of his insensible companions. Every piece of equipment in the control room was dead! With a growing feeling of apprehension, the Doctor turned to the console's small monitor screens and gently lifted Nyssa's limp head and arms away, examining the readout. The Tardis's energy levels read almost zero! Something had siphoned off close to every morsel of power in the storage batteries and was even now draining what little remained!

The Doctor began to worry; in simple terms that meant that the Tardis was helpless, incapable of manoeuvring, incapable of defending itself and incapable of sustaining life for very much longer. Soon—very soon if the power loss continued at its present rate—the life-support mechanisms would terminate and he and his companions would die a lingering death as the intense cold of deep space crept over them, freezing them for all eternity!

The Doctor stood back from the console, surprised that he had to steady himself as he threatened to overbalance. He had done too much, too soon after regaining consciousness. He was weaker than he thought. The Doctor shook his head, trying to clear the sluggishness that had returned to his thoughts, but failing as the Tardis suddenly shuddered, and he found himself desperately grasping the console to remain upright. The Tardis was moving! But with so little power that was impossible! Unless... unless something was moving the Tardis! Vaguely, the Doctor realised that his time and space craft must still be in the grip of whatever had attacked it. If that was true, he had to remain conscious. He had to do something. They were helpless! Do something... do some... The Doctor's thoughts tapered off as black shapes danced before his eyes. He didn't feel himself collide with the console as he collapsed once more into oblivion, crashing to the floor and lying still.

The thing had been given many names, but men called it Voorvolika. Those who had seen it had compared it with a vision of hell. Voorvolika meant evil. Those who had seen it and felt its touch had died. Voorvolika knew that some were feeling its touch now. A tiny thing called Tardis. Living beings whose names would come to it soon. Energy. Voorvolika was hungry. Voorvolika was feeding.

"Doctor?"

A voice. The Doctor thought for a second that he knew the voice. Leela? No, Leela was on Gallifrey. Nyssa then? Tegan?

"Doctor!"

The voice was more insistent now. The Doctor could feel himself lying on something hard. His eyelids fluttered. His eyes opened. The Doctor could see Tegan bending over him, looking weaker than he felt. He had never seen her look so old.

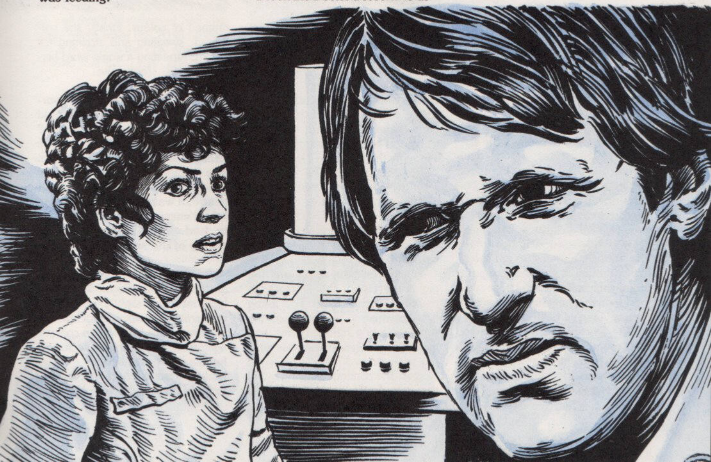
The Doctor sat up slowly, then stood and moved immediately to the energy monitors. The lights in the control room had dimmed until they were almost out, and he had to squint to see. The monitors were no longer dropping. They couldn't drop, for they read zero. Zero! The Doctor listened; the life support systems had stopped. But they were still alive! The Doctor knew then that the Tardis was no longer in space, it was the only explanation possible. Whatever had captured them was somehow maintaining oxygen and temperature from outside the ship!

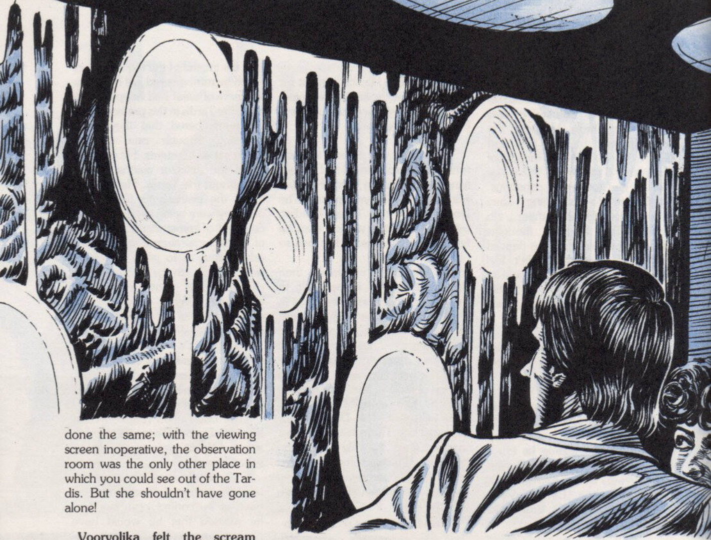
It took the Doctor a second to absorb the impact of the realisation, in which he remembered just how little he knew of what had happened to place the Tardis in this predicament. He remembered that they were travelling through one of the perimeter star systems. He remembered the detector alarms ringing throughout the Tardis. He remembered the instruments telling him that they were being approached by an object of immense size. But most of all he remembered being intensely curious as to what the object was. After that, though, he remembered nothing. Only blackness. What could have ensnared them? A spaceship? An asteroid belt? What?

The Doctor's thoughts were cut short by a scream that echoed from deep in the Tardis, and with a jolt the Doctor realised that Nyssa was missing from the control room.

"The observation room!" Across from the Doctor, Tegan stiffened in alarm. "Nyssa went to the observation room!"

For a second the Doctor was irritated by the news. Nyssa shouldn't have left the control room! But then he realised that he would have





done the same; with the viewing screen inoperative, the observation room was the only other place in which you could see out of the Tardis. But she shouldn't have gone alone!

Voorvolika felt the scream penetrate its being. It felt the horror and revulsion. It knew that one of the beings was watching it from deep within. The being's name was Nyssa, it felt that now. It felt Nyssa. Voorvolika reached out and absorbed.

The observation room of the Tardis is a small room nestled deep within maze-like interior corridors, neglected, dark and silent. At one time, the Doctor had used it as a quiet retreat, finding relaxation in the wall-length port's panoramic view of the surrounding heavens as the Tardis travelled through space. Now, though, it showed something horrifyingly different. Those who had seen the thing had been right; it **was** a vision of hell.

The Doctor and Tegan entered the room prepared to deal with anything except what they saw. In that instant, they knew what had made Nyssa scream.

The thing pressed up against the thick plastic of the observation port, totally obscuring anything else. Here and there, grotesque suckers adhered to the plastic, releasing sickly white fluids which oozed slowly downwards. Elsewhere, the body crushed inward, fist-thick veins and arteries pulsing with life. Through the hull, the Doctor and Tegan could hear a dull hammer-blow which reverberated through their bones; the beat of a gigantic alien heart.

"My God. We're inside it!" Tegan gasped, her voice cracking with revulsion.

Trying his best to ignore the nightmare vision, the Doctor's attention turned to Nyssa. The young girl crouched in a corner of the room, pressing herself further and further back against the wall until her body arched. Oblivious to the Doctor, she continued staring out of the port, her face a fearful mask drained of colour. Finally she collapsed, sweating and straining for breath, repeating a single word between gasps: Voorvolika.

The beings were aware of Voorvolika now. Voorvolika could sense it. What were their names? What had it learned from the one called Nyssa? The names. Tegan. The Doctor. Yes, Voorvolika had touched the one called the Doctor before. It was a strange name, but it had energy. Voorvolika wanted to feed. Voorvolika wanted the energy of the names.

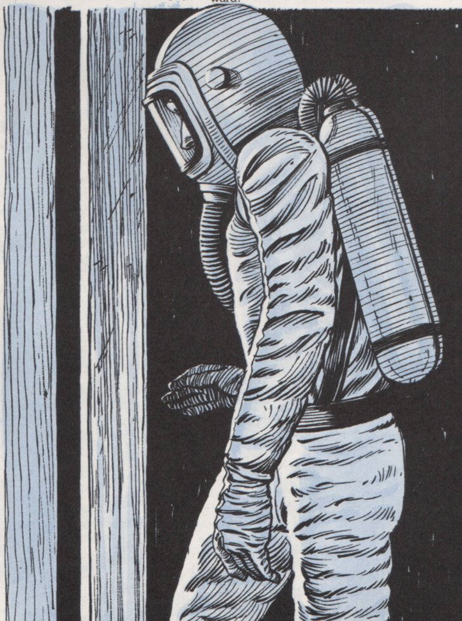
As she watched the Doctor examining Nyssa, Tegan could see him swaying slightly, beads of perspiration breaking out on his forehead. Was he going to collapse again? He **did** seem to be having trouble with his balance. Tegan blinked. That was odd. She seemed to be having trouble with her eyes, having difficulty focusing. Her legs seemed to be shaking too. It was something more than the weakness she had felt before, something pulling at her, something draining her, something outside the ship! What was that word Nyssa had repeated? Voorvolika? What was Voorvolika?

The last thing Tegan saw was the Doctor moving slowly towards her.

Tegan was out cold by the time the Doctor reached her, having fallen moaning to the floor. The Doctor knew now what was happening to them all, what had been happening to them ever since they had first been struck unconscious. The thing outside was feeding on them in the same way that it had fed on the Tardis, it was the only thing that could explain the progressive weakness he had been feeling. They were being slowly drained, like batteries, their life forces sucked away by some cosmic leech! The Doctor checked himself as he felt his knees start to buckle and forced himself to think. He had to stay awake! The leeching had to be stopped! Deciding on his course of action, the Doctor moved unsteadily out of the observation room and through the Tardis, knowing full well that if he collapsed again he might never wake up. What he was about to do was the only chance of survival that he, Tegan and Nyssa had!

B929 energy concentrate is a highly potent drug; ten drops have been known to give a man sufficient energy to destroy an army, twelve drops have been known to make a man literally explode with uncontrollable power. The Doctor gave himself eleven drops. He knew almost immediately why the drug had been banned on most worlds as being too dangerous, and for a second thought he had overdone the dosage, expecting to keel over and die where he stood. The fluid raced through his body like fire, enveloping all his vital organs and making his nerves and muscles pulse as if electrically charged. The Doctor's head thudded with the input of his own crazily-accelerated twin hearts. The Doctor found even the idea of using a drug loathsome but knew that he had no alternative; without it he did not have sufficient energy to walk ten paces. Finally, the drug settled down and the Doctor felt its full benefit; all signs of weakness and sluggishness vanished to be replaced by an adrenal surge on which he propelled himself out of the room en route for the Tardis's door. The Doctor knew what he had to do. He was going outside!

The manual environment monitor beside the door indicated that there was indeed a breathable atmosphere outside the Tardis, but the Doctor was taking no risks. He clipped himself into a vacuum suit and switched on the air supply. It tasted stale and bottled but at least he could be sure of it. When he had done that the Doctor moved over to the central console and flicked on a series of switches marked ENERGY INPUT, then took a small hand device from a cabinet below and switched it on. The needle at the top of the device remained still, but the Doctor knew that if his plan worked it would soon start quivering up the scale. **If** his plan worked. All preparations completed, the Doctor moved back to the door and grasped the manual lock, taking a deep breath. The Doctor knew that he could be going to his death and he always hesitated where death was concerned. Finally, he steeled himself and swung the lever down. The Tardis's door swung slowly inward.



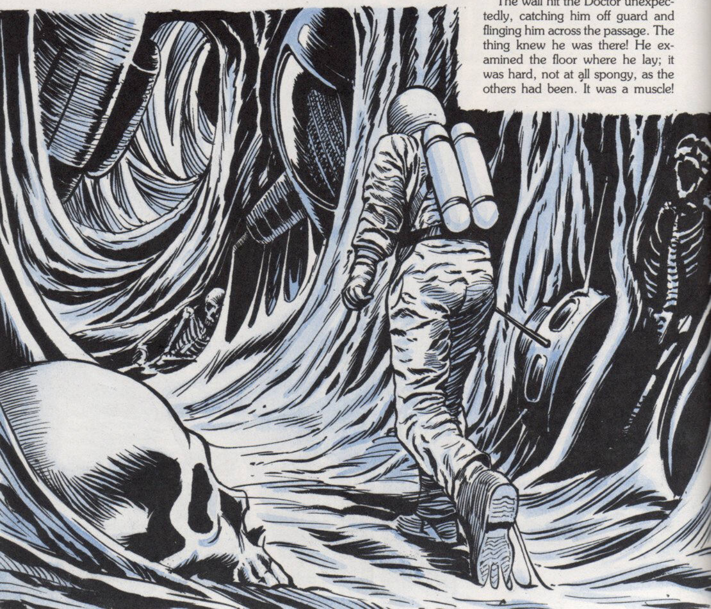
The tiny being called the Doctor was going to fight Voorvolika! He was there, now, ready to enter the body. It could not be permitted! What was he going to do? Voorvolika touched the mind of the being called the Doctor and it knew. The Doctor would die! Voorvolika would touch him more than it had touched anything else! The Doctor would touch Voorvolika. All Voorvolika had to do was wait!

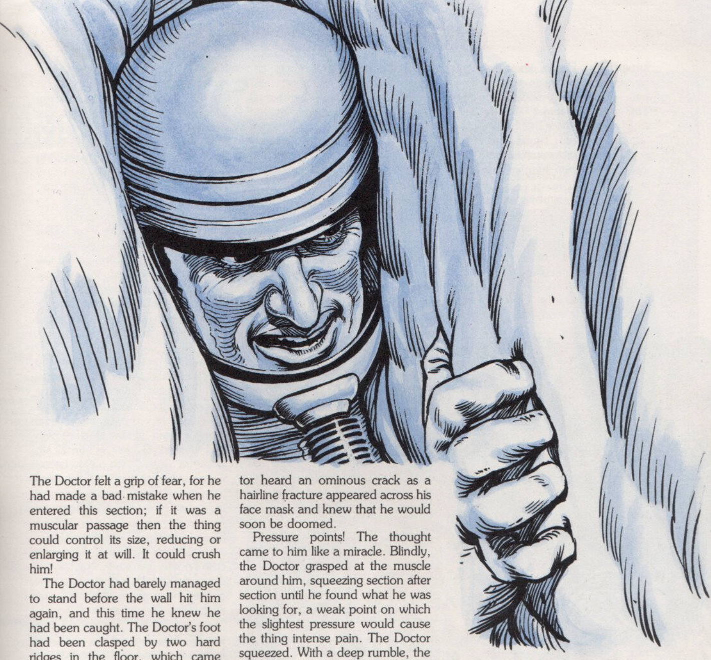
The view out of the Tardis's door was similar to that of the observation port, except this time there was no plastic between the thing outside and the Doctor. Through his helmet, the Doctor could hear the obscene gurgling and hissing that permeated the thing's body and could see white slime dripping from it onto the floor of the Tardis. The flesh of the thing heaved in a bizarre approximation of breathing and the Doctor waited until it seemed to deflate and then he pushed his way in.

The flesh parted before him, a thin membrane that clung to the Doctor's suit until he pulled through. Some of the slime ran onto his helmet and he wiped it away, looking out at what lay before him. He had broken what appeared to be a valve with soft, rippling passages running up above his head and away from his right side. In places above him, sacks of flesh hung quivering, like fluid stalactites. The Doctor grasped one of these and flung himself up into the passage above, causing the walls to vibrate like jelly around him.

The Doctor moved down the passage, his feet sinking sickeningly as if he were walking on a rubber raft on water. He could hear the heartbeat of the thing surrounding him and he shuddered. As he proceeded, the Doctor could just make out large dark shapes that seemed to have been absorbed into the walls like flies in amber, and his face turned grim as he realised what they were: the skeletal remains of other beings and ships that had themselves been trapped and drained by the thing. The Doctor hoped that one day another like him would not gaze into the walls and see the shape of a small, dark blue police box.

The wall hit the Doctor unexpectedly, catching him off guard and flinging him across the passage. The thing knew he was there! He examined the floor where he lay; it was hard, not at all spongy, as the others had been. It was a muscle!





The Doctor felt a grip of fear, for he had made a bad mistake when he entered this section; if it was a muscular passage then the thing could control its size, reducing or enlarging it at will. It could crush him!

The Doctor had barely managed to stand before the wall hit him again, and this time he knew he had been caught. The Doctor's foot had been clasped by two hard ridges in the floor, which came together like a clam. It was stuck hard! On either side of the passage, the walls started to close in and the Doctor snapped his head from side to side, judging how much time he had. Seconds! Frantically, the Doctor tugged at his ankle, his breath clouding his mask. It was no good! Already, he could feel the walls pressing in on his arms. The Doctor let his body relax, reducing his size in an attempt to gain all the time he could. The walls started to squeeze. Within seconds, the Doctor was gasping for breath, his rib cage being crushed until he felt his hearts would puncture. He gritted his teeth in pain. He had to think! The Doctor heard an ominous crack as a hairline fracture appeared across his face mask and knew that he would soon be doomed.

Pressure points! The thought came to him like a miracle. Blindly, the Doctor grasped at the muscle around him, squeezing section after section until he found what he was looking for, a weak point on which the slightest pressure would cause the thing intense pain. The Doctor squeezed. With a deep rumble, the passage heaved and the Doctor felt an instant release of pressure. It had worked! For the first time since he had entered the thing, the Doctor knew that he might just have a chance of succeeding in his aim.

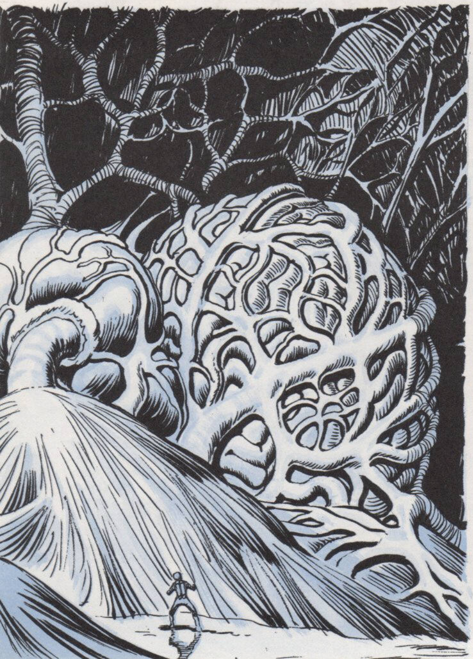
Pain! Voorvolika has never felt pain! Voorvolika must fight! Voorvolika must survive!

As he progressed through the body of the thing, the Doctor lost count of the number of chambers and labyrinthine sub-passages through which he travelled. Once, when he came upon a shaft that ran vertically down in a bottomless drop, he spotted the distant blue shape of the Tardis and realised with a shock the true size of the thing in which he was entrapped—the Tardis looked like a blue speck of dust, far, far away. That fact brought home to the Doctor just how tired he was and for a second he felt like giving up. Then, unexpectedly coming into view through yet another passage, the Doctor saw what he had been looking for.

Before him, a valve opened and closed like the iris of a camera. Through it, the Doctor saw a vast chamber draped in tendrils of tissue-like matter that bounced flecks of light to each other as they turned. The Doctor knew that he was looking at pure energy, the life-force of the thing, and he smiled. **This** was his target. Taking the small needle device that he had collected from the Tardis out of a pocket, the Doctor waited until the iris opened, then jumped into the chamber.

He saw the brain-heart at once as it rose from behind a mountain of flesh to overshadow him. The Doctor gasped; he had never encountered life that took this form before. It was a grotesque combination of a brain and a heart, fused in symbiosis like Siamese twins. Blood vessels leading from the heart entwined the brain and others anchored themselves in the walls, floor and ceiling of the chamber all around. The brain-heart moved towards the Doctor, an immense mass of pulsating matter that intended to kill. Adrenalin surging through him, the Doctor rolled for cover.

The brain-heart attacked at once, causing crackling columns of energy to fire from itself and surround the Doctor. Falling to his knees, the Doctor hissed with pain; he had been caught off guard again, surprised by the swiftness of the attack! He knew that he had just commenced perhaps the worst fight of his life, and it was one in which he had no intention of fighting back! As he felt the searing heat of the energy columns begin to penetrate his suit, burrowing fingers of flame through the material to search out his flesh, the Doctor looked at the measuring device and saw that his plan was working. Already, the needle had begun to move up the scale…



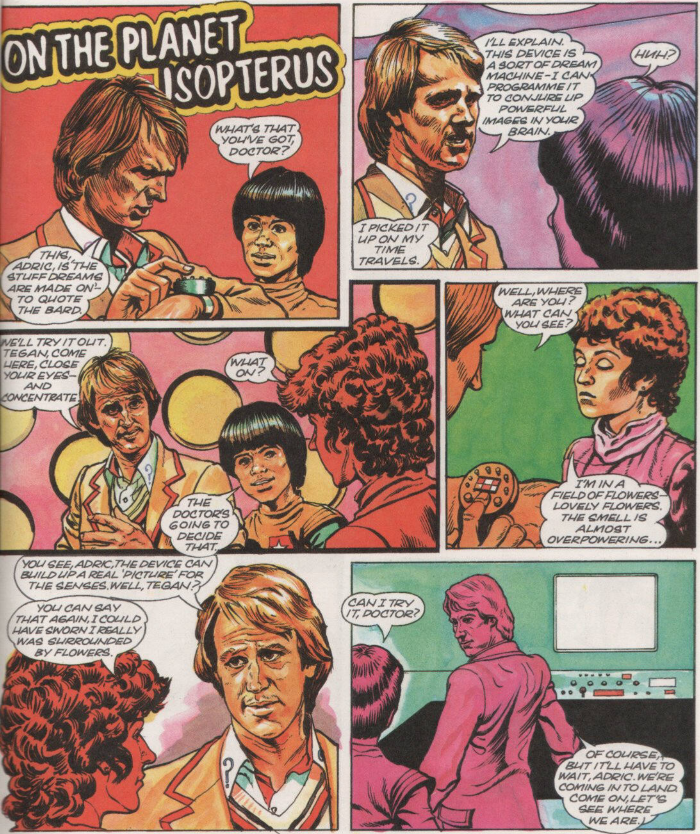
I am Voorvolika! Voorvolika must not die! Voorvolika must multiply! No! The thing called the Doctor has tricked Voorvolika! The tiny, feeble thing has beaten me! Voorvolika weakens! Energy! So little energy! Voorvolika must kill! So little ener…

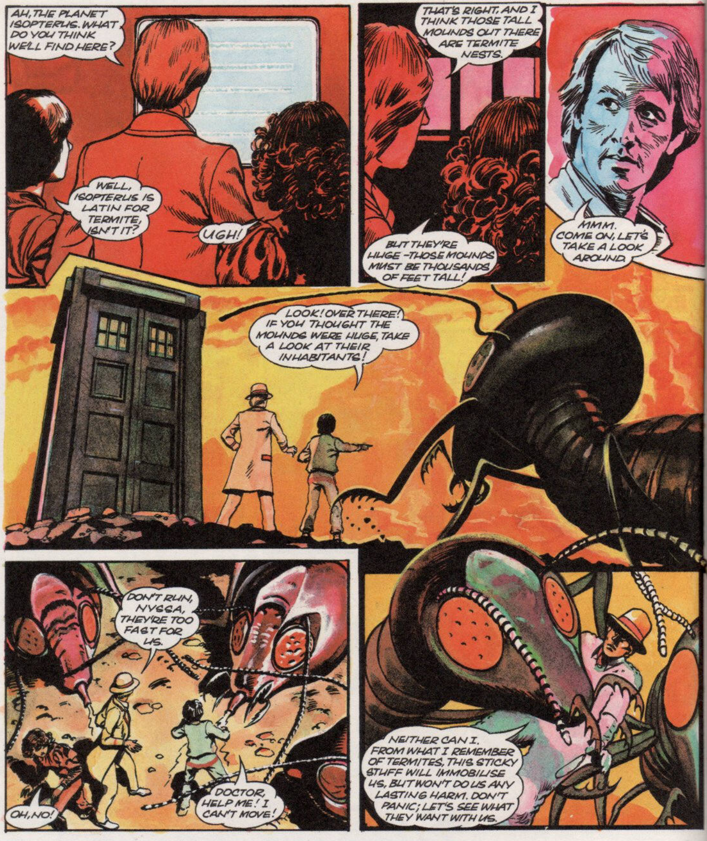
The Doctor stood back from the Tardis console and emitted a weary sigh of success, having completed a successful dematerialisation. Across the console, the energy level monitors read full; the Doctor's plan had worked. By setting himself up as bait, a threat which had to be extinguished, he had forced the thing to expend energy in a vicious attack, energy which had been instantly absorbed by the Tardis's open energy input valves, replenishing the time-and-space craft's power levels and draining the thing of a life-force that would take centuries to replace, forcing it into suspended animation.

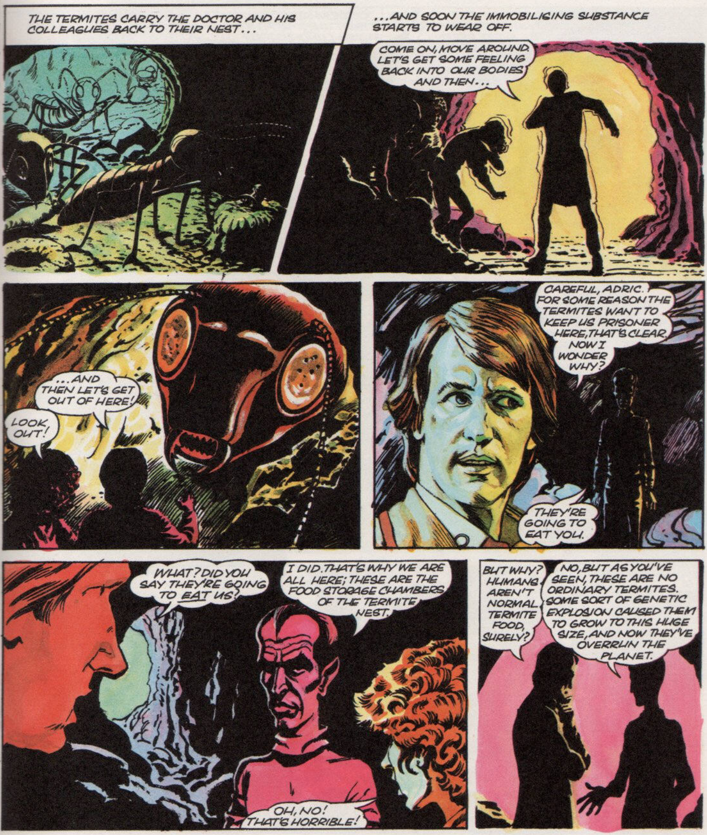
As the Tardis spun off through space, the Doctor remembered feeling the mind of the thing touch him. He remembered knowing in that instant that it was totally evil. And he remembered learning with horror exactly what the thing was; an immense galactic grub which slumbered in a chrysalis state, waiting until the day it had fed upon enough innocent souls and spacecraft to multiply itself in a terrifying form!

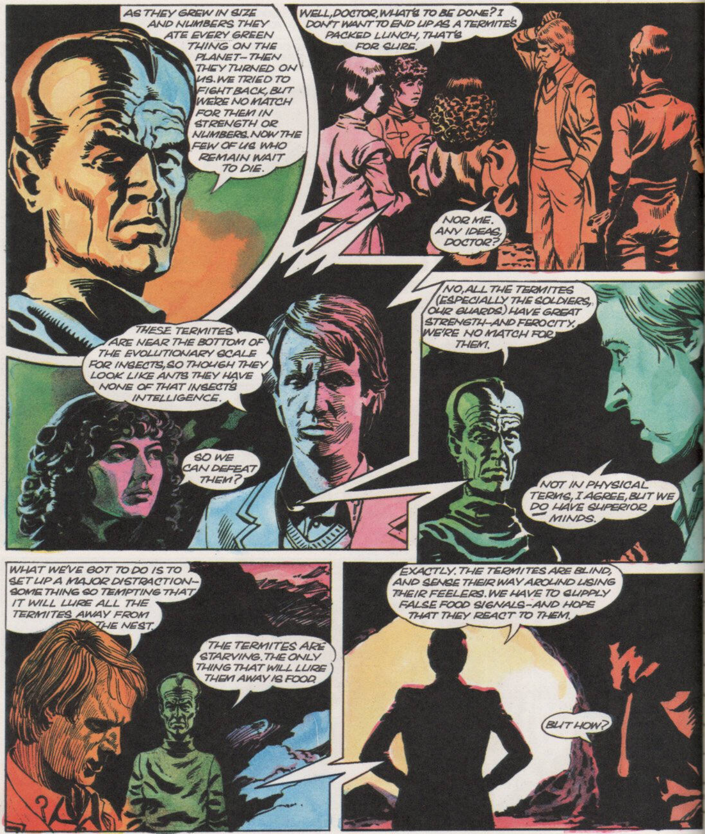
One day, when the effects of suspended animation finally wore off, the thing would awake again and once more begin to prey on life. On that day, thought the Doctor, a certain Time Lord would have to make sure he was nearby. He was not looking forward to it.

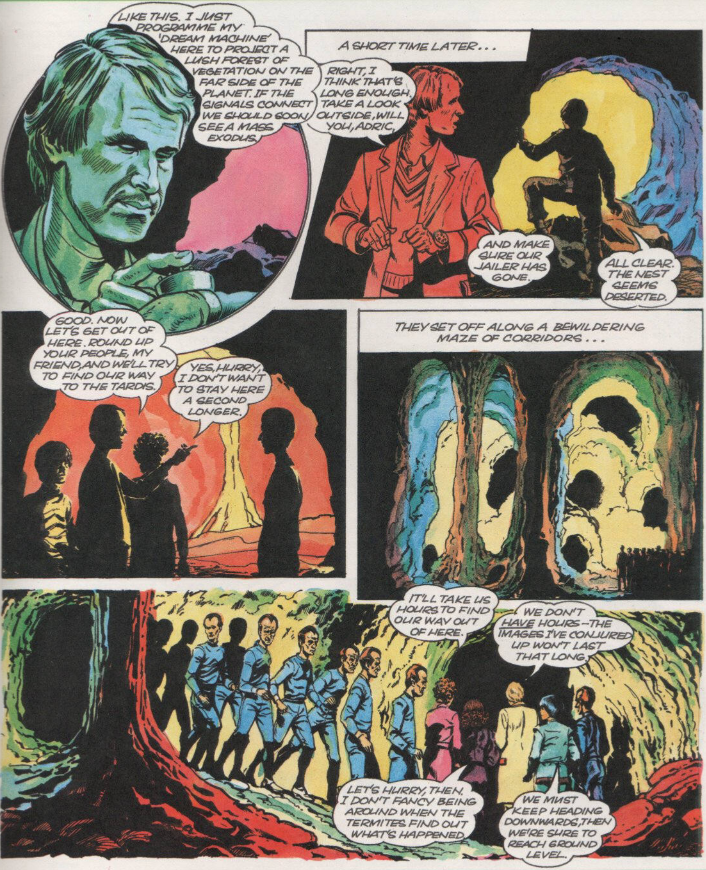
ON THE PLANET ISOPTERUS

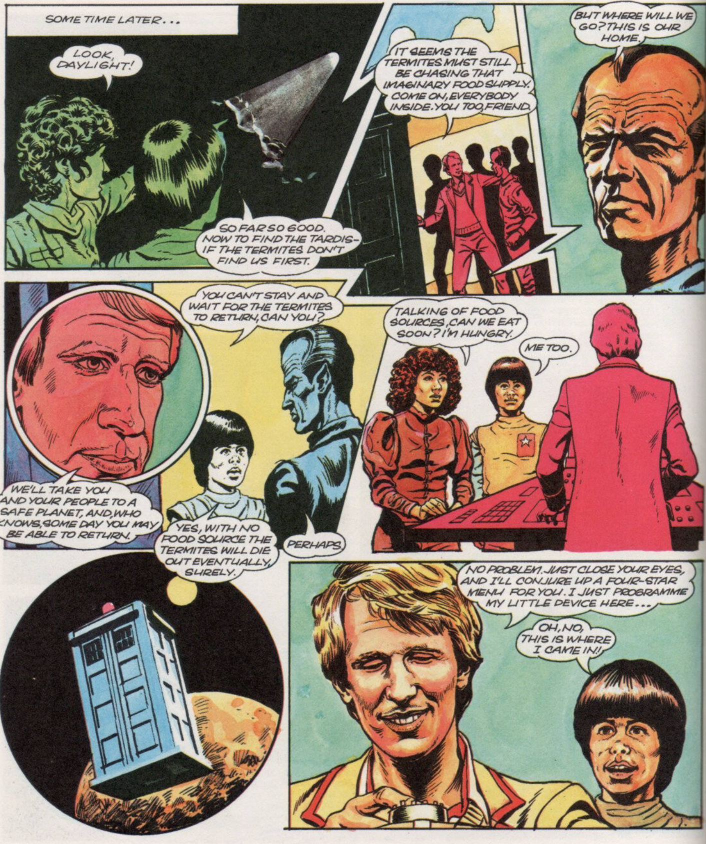

WHAT'S THAT YOU'VE GOT, DOCTOR?
THIS, ADRIC, IS 'THE STUFF DREAMS ARE MADE ON'- TO QUOTE THE BARD.
I'LL EXPLAIN. THIS DEVICE IS A SORT OF DREAM MACHINE - I CAN PROGRAMME IT TO CONJURE UP POWERFUL IMAGES IN YOUR BRAIN.
HUH?
I PICKED IT UP ON MY TIME TRAVELS.
WE'LL TRY IT OUT. TEGAN, COME HERE, CLOSE YOUR EYES- AND CONCENTRATE.
WHAT ON?
THE DOCTOR'S GOING TO DECIDE THAT.
WELL, WHERE ARE YOU? WHAT CAN YOU SEE?
I'M IN A FIELD OF FLOWERS- LOVELY FLOWERS. THE SMELL IS ALMOST OVERPOWERING...
YOU SEE, ADRIC, THE DEVICE CAN BUILD UP A REAL 'PICTURE' FOR THE SENSES. WELL, TEGAN?
YOU CAN SAY THAT AGAIN, I COULD HAVE SWORN I REALLY WAS SURROUNDED BY FLOWERS.
CAN I TRY IT, DOCTOR?
OF COURSE, BUT IT'LL HAVE TO WAIT, ADRIC. WE'RE COMING IN TO LAND. COME ON, LET'S SEE WHERE WE ARE.


AH, THE PLANET ISOPTERUS. WHAT DO YOU THINK WE'LL FIND HERE?
WELL, ISOPTERUS IS LATIN FOR TERMITE, ISN'T IT?
UGH!
THAT'S RIGHT, AND I THINK THOSE TALL MOUNDS OUT THERE ARE TERMITE NESTS.
BUT THEY'RE HUGE – THOSE MOUNDS MUST BE THOUSANDS OF FEET TALL!
MMM. COME ON, LET'S TAKE A LOOK AROUND.
LOOK! OVER THERE! IF YOU THOUGHT THE MOUNDS WERE HUGE, TAKE A LOOK AT THEIR INHABITANTS!
DON'T RUN, NYSSA, THEY'RE TOO FAST FOR US.
OH, NO!
DOCTOR, HELP ME! I CAN'T MOVE!
NEITHER CAN I. FROM WHAT I REMEMBER OF TERMITES, THIS STICKY STUFF WILL IMMOBILISE US, BUT WON'T DO US ANY LASTING HARM. DON'T PANIC; LET'S SEE WHAT THEY WANT WITH US.

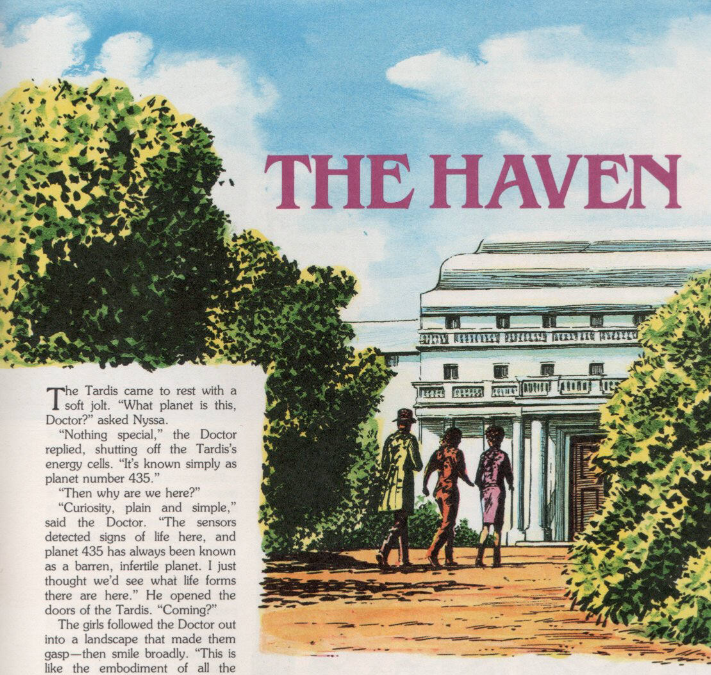

THE TERMITES CARRY THE DOCTOR AND HIS COLLEAGUES BACK TO THEIR NEST...
...AND SOON THE IMMOBILISING SUBSTANCE STARTS TO WEAR OFF.
COME ON, MOVE AROUND. LET'S GET SOME FEELING BACK INTO OUR BODIES AND THEN...
...AND THEN LET'S GET OUT OF HERE!
LOOK OUT!
CAREFUL, ADRIC. FOR SOME REASON THE TERMITES WANT TO KEEP US PRISONER HERE, THAT'S CLEAR. NOW I WONDER WHY?
THEY'RE GOING TO EAT YOU.
WHAT? DID YOU SAY THEY'RE GOING TO EAT US?
I DID. THAT'S WHY WE ARE ALL HERE; THESE ARE THE FOOD STORAGE CHAMBERS OF THE TERMITE NEST.
OH, NO! THAT'S HORRIBLE!
BUT WHY? HUMANS AREN'T NORMAL TERMITE FOOD, SURELY?
NO, BUT AS YOU'VE SEEN, THESE ARE NO ORDINARY TERMITES. SOME SORT OF GENETIC EXPLOSION CAUSED THEM TO GROW TO THIS HUGE SIZE, AND NOW THEY'VE OVERRUN THE PLANET.


AS THEY GREW IN SIZE AND NUMBERS THEY ATE EVERY GREEN THING ON THE PLANET—THEN THEY TURNED ON US. WE TRIED TO FIGHT BACK, BUT WE'RE NO MATCH FOR THEM IN STRENGTH OR NUMBERS. NOW THE FEW OF US WHO REMAIN WAIT TO DIE.
WELL, DOCTOR, WHAT'S TO BE DONE? I DON'T WANT TO END UP AS A TERMITE'S PACKED LUNCH, THAT'S FOR SURE.
NOR ME. ANY IDEAS, DOCTOR?
THESE TERMITES ARE NEAR THE BOTTOM OF THE EVOLUTIONARY SCALE FOR INSECTS, SO THOUGH THEY LOOK LIKE ANTS THEY HAVE NONE OF THAT INSECTS INTELLIGENCE.
SO WE CAN DEFEAT THEM?
NO, ALL THE TERMITES (ESPECIALLY THE SOLDIERS, OUR GUARDS) HAVE GREAT STRENGTH—AND FEROCITY. WE'RE NO MATCH FOR THEM.
NOT IN PHYSICAL TERMS, I AGREE, BUT WE DO HAVE SUPERIOR MINDS.
WHAT WE'VE GOT TO DO IS TO SET UP A MAJOR DISTRACTION—SOME THING SO TEMPTING THAT IT WILL LURE ALL THE TERMITES AWAY FROM THE NEST.
THE TERMITES ARE STARVING. THE ONLY THING THAT WILL LURE THEM AWAY IS FOOD.
EXACTLY. THE TERMITES ARE BLIND, AND SENSE THEIR WAY AROUND USING THEIR FEELERS. WE HAVE TO SUPPLY FALSE FOOD SIGNALS—AND HOPE THAT THEY REACT TO THEM.
BUT HOW?


LIKE THIS. I JUST PROGRAMME MY 'DREAM MACHINE' HERE TO PROJECT A LUSH FOREST OF VEGETATION ON THE FAR SIDE OF THE PLANET. IF THE SIGNALS CONNECT WE SHOULD SOON SEE A MASS EXODUS.
A SHORT TIME LATER...
RIGHT, I THINK THAT'S LONG ENOUGH. TAKE A LOOK OUTSIDE, WILL YOU, ADRIC,
AND MAKE SURE OUR JAILER HAS GONE.
ALL CLEAR. THE NEST SEEMS DESERTED.
GOOD. NOW LET'S GET OUT OF HERE. ROUND UP YOUR PEOPLE, MY FRIEND, AND WE'LL TRY TO FIND OUR WAY TO THE TARDIS.
YES, HURRY. I DON'T WANT TO STAY HERE A SECOND LONGER.
THEY SET OFF ALONG A BEWILDERING MAZE OF CORRIDORS...
IT'LL TAKE US HOURS TO FIND OUR WAY OUT OF HERE.
WE DON'T HAVE HOURS--THE IMAGES I'VE CONJURED UP WON'T LAST THAT LONG.
LET'S HURRY, THEN. I DON'T FANCY BEING AROUND WHEN THE TERMITES FIND OUT WHAT'S HAPPENED.
WE MUST KEEP HEADING DOWNWARDS, THEN WE'RE SURE TO REACH GROUND LEVEL.


SOME TIME LATER...
LOOK, DAYLIGHT!
SO FAR SO GOOD. NOW TO FIND THE TARDIS- IF THE TERMITES DON'T FIND US FIRST.
IT SEEMS THE TERMITES MUST STILL BE CHASING THAT IMAGINARY FOOD SUPPLY. COME ON, EVERYBODY INSIDE. YOU TOO, FRIEND.
BUT WHERE WILL WE GO? THIS IS OUR HOME.
YOU CAN'T STAY AND WAIT FOR THE TERMITES TO RETURN, CAN YOU?
YES, WITH NO FOOD SOURCE THE TERMITES WILL DIE OUT EVENTUALLY, SURELY.
PERHAPS.
WE'LL TAKE YOU AND YOUR PEOPLE TO A SAFE PLANET, AND, WHO KNOWS, SOME DAY YOU MAY BE ABLE TO RETURN.
TALKING OF FOOD SOURCES, CAN WE EAT SOON? I'M HUNGRY.
ME TOO.
NO PROBLEM. JUST CLOSE YOUR EYES, AND I'LL CONJURE UP A FOUR-STAR MENU FOR YOU. I JUST PROGRAMME MY LITTLE DEVICE HERE...
OH, NO, THIS IS WHERE I CAME IN!

THE HAVEN



The Tardis came to rest with a soft jolt. "What planet is this, Doctor?" asked Nyssa.

"Nothing special," the Doctor replied, shutting off the Tardis's energy cells. "It's known simply as planet number 435."

"Then why are we here?"

"Curiosity, plain and simple," said the Doctor. "The sensors detected signs of life here, and planet 435 has always been known as a barren, infertile planet. I just thought we'd see what life forms there are here." He opened the doors of the Tardis. "Coming?"

The girls followed the Doctor out into a landscape that made them gasp—then smile broadly. "This is like the embodiment of all the descriptions of paradise I've ever read," said Nyssa. "It's **beautiful**."

Tegan could only nod in agreement as she gazed about her.

A pale yellow sun sent darts of light through cotton-wool clouds pinned against a too-blue sky, creating a soft, hazy light that bathed everything in a warm glow. Luxuriant plants and flowers grew everywhere, birds sang sweetly, and the scene was completed by a rushing brook that sparkled and danced over warm-gold pebbles. A peaceful calm pervaded the whole scene.

"Planet number 435 just doesn't do this place justice," Nyssa reflected. "It should have some soft, romantic name. Perfection, perhaps?" She laughed.

"Mmm," said the Doctor, looking around. "Just a little too close to perfection, or at least to the popular view of it, to my way of thinking."

"Cynic," said Nyssa.

The three of them walked slowly along a broad path until, as the ground dropped away before them, they came upon a huge mansion. It stood, pillared and colonnaded, built completely in white marble, amidst wonderful gardens. "Like a fairy palace in an old tale," Tegan commented.

"Looks like this is the life form my sensors reported," said the Doctor. "Let's go and see if there's anyone at home."

They walked on down the curving driveway and entered the splendid house.

WELCOME TO THE HAVEN said an elaborate sign above the huge doors; PLEASE ENTER.

The interior of the building was in white marble, too, and the strains of softly-played organ music could be heard in the background. No one stood at the carved reception desk, and Nyssa's hand hesitated over the bell; such a jarring noise seemed out of place in the building. The atmosphere was almost holy.

Instead Nyssa pulled the register towards her and started to read out loud. "Giles Thornton, Mary Thackeray, William Bryce," she read. "They all checked in here in 1993, according to the register—but the date on the calendar shows 2330! That's over three hundred years ago—but the place looks new—and spotless. What do you think, Doctor?"

"I think we'll ring for some service," said the Doctor, bringing his hand down hard on the bell.

The sound was harsh and hard as it echoed around the cavernous room, and they were all startled when a voice from behind them said, so quietly that it was hardly audible: "May I help you?"

The speaker was an ageless man, dressed in long white robes that fell to his sandalled feet. His face was totally composed, and showed no sign of emotion or animation. His voice had that same quality. He stared blankly at the Doctor and the girls, betraying nothing.

"We've just landed here on planet 435," said the Doctor, gesturing to the others, "and we wondered what was going on here. 435 is recorded as a barren planet."

"You are in The Haven," the man replied, in the same even tone.

"The Haven?" asked the Doctor.

"Yes."

The Doctor looked exasperated; the man was obviously not the informative type. "Who lives here?" he asked.

"I do."

"And no one else? Don't you get lonely?"

"I am not lonely."

"Then there are others?" the Doctor asked. "Can we meet them?"

The man's face betrayed neither anger nor acquiescence: "That is not possible."

"Why?"

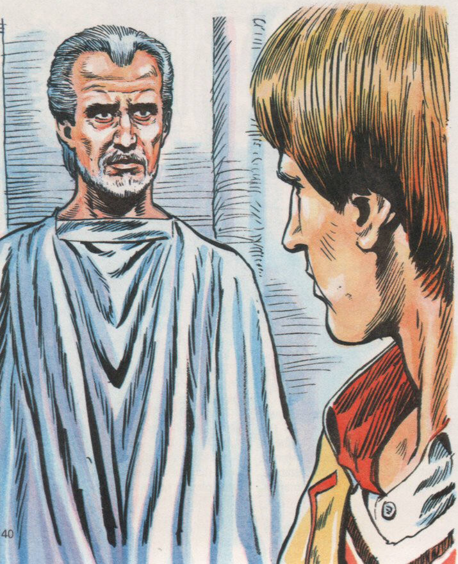
"It is not possible," said the man.

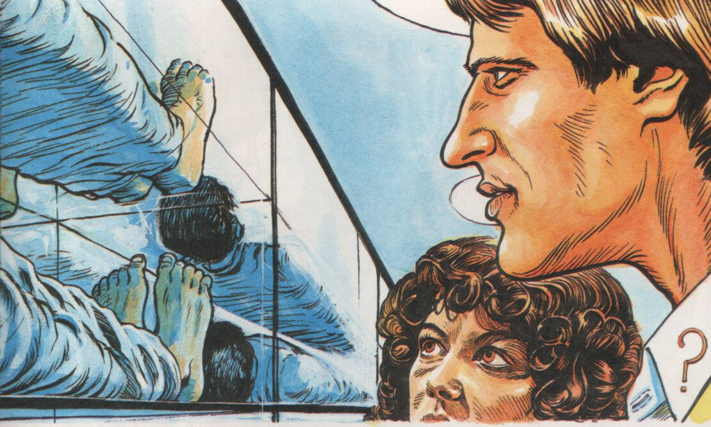
Tegan had wandered off to look around the huge room, bored with the question and answer session. She had walked along one of the passageways that appeared to radiate from the central room, and was stopped in her tracks by what she saw. "**Doctor**," she cried. "Look!"

Something in her tone made the Doctor stop in mid-question and hurry towards her, leaving the man open-mouthed. "Wait, you..." he said, and for the first time he moved, putting out a hand slowly as if to restrain the Doctor.

But the Doctor was already at Tegan's side, staring at what she had seen. And what she had seen clouded the Doctor's features...

Behind thick, very lightly frosted glass walls lay neat rows of glass caskets, like see-through coffins. Crystals of ice glistened in the soft light that bathed the chamber and





ice crystals also glistened on the robes that clothed the bodies that lay inside the coffins.

The Doctor turned from the glass to find that the man had come, silently, to stand behind him. "What's going on here?" the Doctor asked, taking in the huge chamber with a sweep of his arm.

"Life is going on," the man answered, his face still mask-like and composed.

"Life?" the Doctor prompted.

"Correct," said the man. "These people are in my care. They are frozen, and when the time is right they will live again."

"You mean they're held in a state of suspended animation?" asked Tegan. "Like they used to freeze bodies in America in the 1980s, so that when medical science progressed they could be cured of whatever killed them and live again?"

"That is correct," the man said. "That was the start of the perfection of the science of cryogenics. By the year 1990 we knew all the secrets of freezing human bodies. These people wait here in The Haven, in my care, until it is time for them to reawaken."

"You mean until whatever killed them in the first place is within medicine's power to cure?" asked the Doctor.

After the slightest, split-second hesitation the man spoke: "Yes."

Tegan shivered. "It's creepy," she said. "Look at them all, there must be thousands of them."

"49,867," the man said. "They came here when conventional medicine failed them, and will remain until the time is right for them to live again."

"Mmmm," said the Doctor. "Well, I've never seen one of these 'rest homes' before, so I'm glad I came. Now we'll leave you to your peace and quiet again, er..."

"Carnak," said the man.

"Thank you for your hospitality, Carnak," said the Doctor. "Come on, Tegan, Nyssa, let's get back to the Tardis."

Carnak spoke not a word as the Doctor and the girls made their way out of the building. When they disappeared through the entrance doors he turned and walked silently away.

Outside, Nyssa turned to the Doctor. "Don't you think we should have a closer look at this place? There's something about it that isn't quite right."

"I quite agree," said the Doctor, "but we can't look around with Carnak breathing down our necks, can we? He wasn't hostile, but I still got the distinct feeling he was glad to see us go."

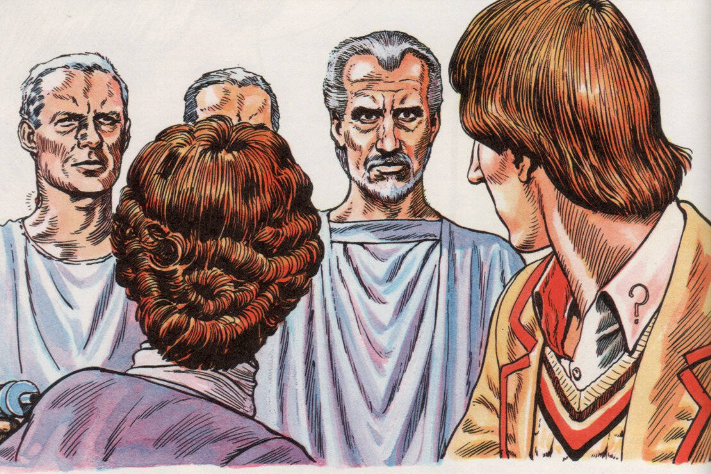
They walked in the grounds until they reached another of the building's radial arms and slipped through a doorway.

The scene was a repeat of the first. Serried rows of glass coffins lined the chamber, each one containing a human body clothed in white. The rows seemed endless.

Tegan peered closely through the thick glass. "Will he really be able to make these people live again?" she asked.

"I very much doubt it," the Doctor said. "The body **can** be preserved by freezing, but that doesn't alter the fact that the people are well and truly dead. No one has yet found a way to cure the things that killed these people; they'll never live again, no matter what Carnak says."

"And what do you think about Carnak?" said Tegan. "He speaks



as though he was here when these people were frozen—but that was more than three hundred years ago, according to the register."

"I know," mused the Doctor. "I really don't know what's going on here, but it certainly doesn't feel quite 'right' somehow."

Nyssa, who had taken no part in the conversation, was staring intently through the glass walls. She motioned for the others to join her. "There's something very odd about these people," she said, pointing to the nearest body. "Look on the left hand side of that man's neck. See it? There's something implanted in his neck! Some metal machine thing!"

"Yes, you're quite right," said the Doctor, peering closer. "It looks like some sort of receiver."

"Quite correct." A voice from behind them made all three start away from the glass wall. The voice was Carnak's.

But this time Carnak was not alone. Three of his 'guests' stood beside him, staring steely-eyed and rigid, the implants in their necks blinking softly. They carried powerful-looking weapons which were trained on the Doctor, Nyssa and Tegan.

And this time Carnak's mask-like face looked rather more menacing. "So you had to snoop and spy?" he said slowly.

The Doctor shrugged resignedly. "I suppose so. Now tell me, Carnak, what **is** going on here?"

"Basically what I told you before," Carnak replied. "My 'guests' signed themselves into The Haven as voluntary patients, on the understanding that when they died their bodies would be frozen and kept in a state of suspended animation until such time as their ills could be cured and they would be restored to life."

"But that won't happen?"

"Correct. I have made—what shall I say?—slight adjustments to their bodies so that for most of the time they are indeed frozen, but I can activate them at will. Thanks to the control implants they respond to my will and do my bidding without fuss or bother."

"Glorified robots," said the Doctor with distaste. "But why, what do you want them to do?"

"Very little," Carnak replied. "I live alone, and like it that way. My requirements are few. I have my 'guests' to maintain The Haven as I like it—and I like it to be perfect in every way. I like beautiful surroundings, but above all peace and quiet. And you, Doctor, have destroyed my peace and quiet."

Carnak closed his eyes momentarily, and immediately the control implants in the guards' necks started to wink rhythmically and to emit low bleeping sounds.

"The guards will take you to one of my freezing chambers," Carnak said. "Please go quietly."

There was enough malice in his voice to make the Doctor realise that the consequences of resisting Carnak's orders would be dire, and he shepherded the girls along in front of the guards.

They were herded towards a chamber that glistened with ice particles, and a heavy door closed behind them. The guards stood outside, their implants still winking like heartbeats.

"What are we going to do, Doctor?" Tegan asked. "He's **mad**."

"Quite right." The Doctor nodded. "I don't know about you, but I don't fancy being frozen in here. We've got to get out."

"But how?" Nyssa asked. "Those guards mean business—or at least Carnak does."

"Mmm, what we have to do is to destroy Carnak's hold over the guards—and all the other guests," the Doctor said. "The guards won't be able to function independently, so what we have to do is to destroy the link from Carnak to the guards."

"But how does he control them?" asked Nyssa. "He doesn't seem to have any console or instrument board."

The Doctor tapped lightly against the side of his head. "This is what Carnak uses to control the guards," he said. "I don't know how he's developed the link, but I'm convinced that his will alone controls the guards, via the implant. He exercises a sort of super willpower over them."

"So how do we put that willpower out of action?" asked Tegan, who by now had started to shiver violently in the low temperature of the freezing chamber.

"I'm going to have to indulge in a bout of mind-wrestling with Carnak," the Doctor replied. "I'll have to try to overcome **his** will with mine, and thus put his control out of action. Without that control the guards revert to what they really are—frozen bodies."

"But can you do it?" Nyssa asked uncertainly. "His will must be pretty powerful, after all."

"That remains to be seen," the Doctor replied. "But I've got to try, if we're not to end up like the others."

He pulled up his collar and blew hard on his hands, which were turning a light blue colour. "Now, if I do manage to engage Carnak in some form of mind-combat, you'll have to act quickly. I'll have my hands full battling against Carnak's will, so it'll be up to you to get us all back to the Tardis."

Tegan nodded. "OK, just tell us what to do."

The Doctor walked towards one of the wheeled trolleys that stood nearby, and lay down on it. "I'll lie here while I engage Carnak's mind, and you must watch the guards closely. When the implants stop pulsing you can be pretty certain that the guards will be out of action seconds later, and that's the time to act. Just wheel me out of here as fast as you can and get us back to the Tardis. Once there we'll be safe. I don't know how long I can cope with Carnak's will, so speed is of the essence, OK?"

The girls nodded grimly, and turned their attention to the guards stationed outside the freezing chamber. Their implants pulsed rhythmically.

The Doctor lay very still, as if composing himself for the battle to come.

When Nyssa took her eyes from the guards for an instant a few minutes later she saw the Doctor's contorted face showing the obvious strain that he was enduring. Both men had a lot at stake—The Doctor not only his life but those of Nyssa and Tegan, too; Carnak his whole sick 'empire'.

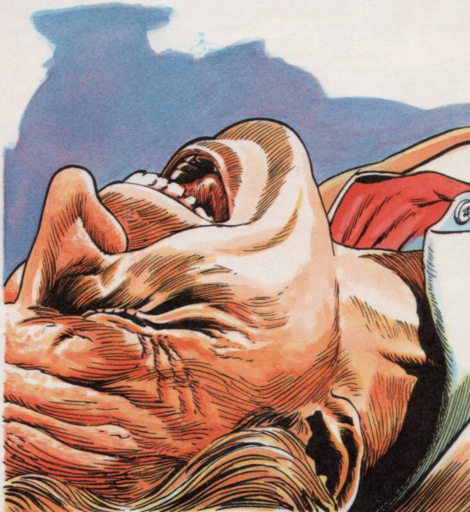
For what seemed like hours, but was in fact minutes, Nyssa and Tegan watched the guards for any telltale sign of the Doctor's control putting Carnak's will out of action.

Suddenly Tegan grabbed Nyssa's arm. "Look!" she whispered. "Did you see that? The implant on the first guard—I'm sure it missed a beat!"

Nyssa stared hard. Yes, Tegan was right—the implants were starting to falter and the lights that glowed from them were fading. The Doctor was winning his struggle to overcome Carnak's mind!

Nyssa risked a quick glance back towards the Doctor. His face was twisted with pain and effort—but he **was** winning.

After agonising seconds Tegan gave a small yelp. "That guard! The



light from the implant has almost disappeared—it looks as though his battery's going flat."

They watched in amazement as the guard seemed to crumple, then slide silently to the floor. The other two followed soon after, all signs of light and movement from the implants gone.

"Now!" said Nyssa, rushing to the trolley and wheeling it towards the door. "Let's get out of here!"

Tegan took one of the handles and the two girls quickly went out into the corridor and started to retrace their steps out of The Haven. "Well done, Doctor!" said Tegan, but the Doctor showed no sign of having heard her...

The organ music still played softly in the background as they rushed past the reception desk, but apart from that there was no sound to be heard.

They raced along the path and almost flung the trolley through the doors of the Tardis, slamming the doors behind them.

The run had warmed them up effectively, but the Doctor was still cold and still. They massaged some colour back into his hands, and slowly the Doctor seemed to revive.

"You're still cold after that spell in the freezing chamber," said Tegan, as the Doctor struggled to sit up, blowing on his hands.

"I'm chilled to the core—and not just because of that freezing chamber," the Doctor said, getting to his feet. "Going inside a mind like Carnak's would freeze anyone with fear."

"But you did win your mind-wrestling bout," said Nyssa. "You did sever Carnak's control over the guards." She thought for a moment. "What will happen to the guards now—and all the other people?"

"I don't really know, but one thing's for sure—somehow or other I did manage to destroy Carnak's control for ever. He won't be able to control the guards now."

"And the other people?"

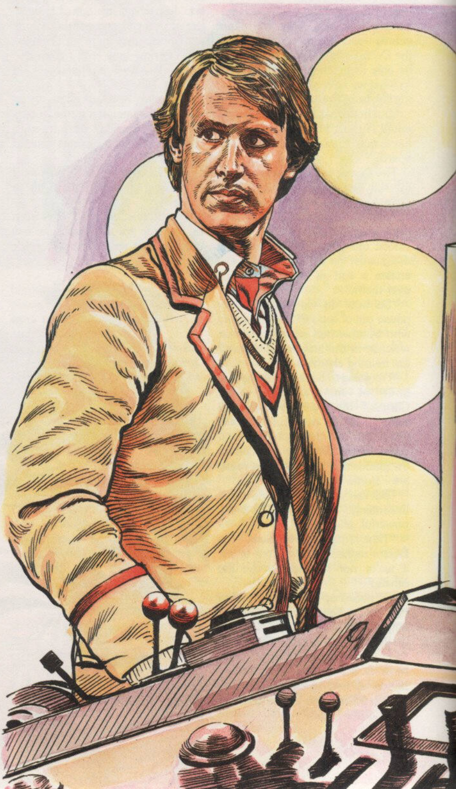
"I don't think you can think of them as people," said the Doctor thoughtfully. "They have human bodies, yes, but they cannot be said to be living beings. Their bodies were kept intact by freezing, but it was an outer shell with no living centre. They were—and are—dead."

"Then we just leave them here?"

"That's right," said the Doctor, walking stiffly to the control console. "There's nothing we or anyone else can do for them. They've been dead since the day they checked in here."

"So where are we heading now, Doctor?" Nyssa asked.

The Doctor gave an almost imperceptible shiver. "I don't know," he said, "but somewhere **warm** I think, don't you?"



A PROBLEM FOR YOU...

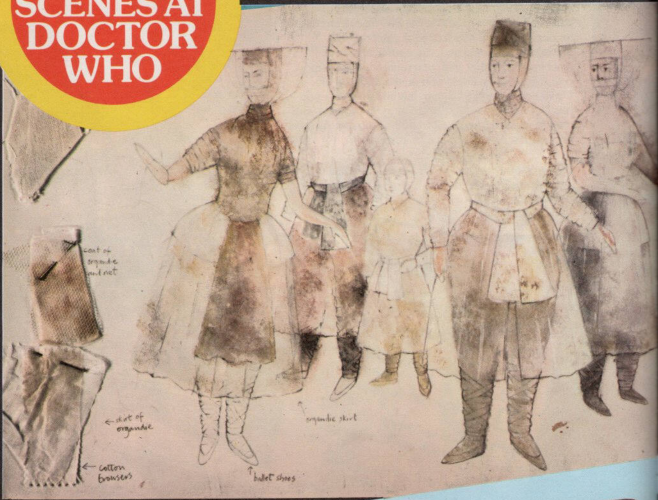
Imagine you're a member of a space crew scheduled to rendezvous with a mother ship on the lighted surface of the moon. Due to mechanical difficulties your ship is forced to land some 200 miles from the rendezvous point. Much of your equipment is damaged on landing and, since survival means reaching the mother ship, you must choose the most critical items to take with you on the 200 mile trip. Listed below are the 15 items left undamaged—you must list them in order of importance in allowing your crew to reach the rendezvous point. Number the most important item 1, and so on to 15.

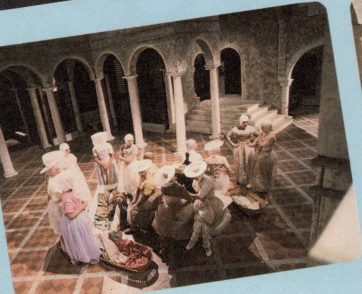
This problem was used by NASA in their training programme—think carefully about your final list, perhaps discussing it with a friend. There is no 'correct' answer.

- ☐ food concentrate
- ☐ parachute silk
- ☐ two .45 calibre pistols
- ☐ two 110lb tanks of oxygen
- ☐ a magnetic compass
- ☐ solar-powered FM receiver-transmitter
- ☐ first aid kit containing injection needles
- ☐ life raft
- ☐ 5 gallons of water
- ☐ one case of dehydrated pet milk
- ☐ box of matches
- ☐ 50' of nylon rope
- ☐ stellar map of the moon's constellations
- ☐ signal flares
- ☐ portable heating unit

BEHIND THE SCENES AT DOCTOR WHO

SET DESIGN AND COSTUME


coat of organdie and net
skirt of organdie
cotton trousers
organdie skirt
ballet shoes



One of the first stories in the new series of Dr Who was called *Castrovalva,* the name of an imaginary city of classic simplicity. Janet Budden was the Set Designer who created this fantastic and beautiful city.

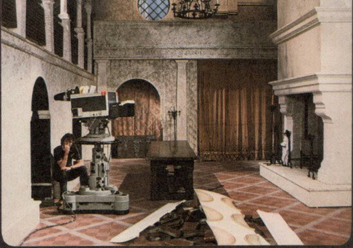
Janet feels that it is essential to sort out the structures of a set first before getting involved in detail. Janet got some of her ideas for the *Castrovalva* set from French medieval castles which she visited on holiday.

''As sets are so expensive to create you cannot afford to make mistakes,'' Janet says, ''so everything is planned in detail and then a working model in miniature is created to make sure everything works and harmonises. Versatility is the name of the game.''

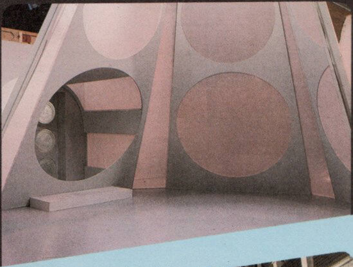
It can take two days to build the actual set in the studio.

Odile Dicks-Mireaux was the Costume Designer for this story. Starting with her original rough designs, and making certain they were in keeping with the story, time and setting, it was then her responsibility to buy all the different material required for costumes for all the cast; organise the making of the costumes, the fitting sessions and alterations and, of course, she must be present on the days the programme is being filmed to ensure that everything in her department works perfectly. At this stage, Odile says, ''alterations are done on the spot during breaks.''

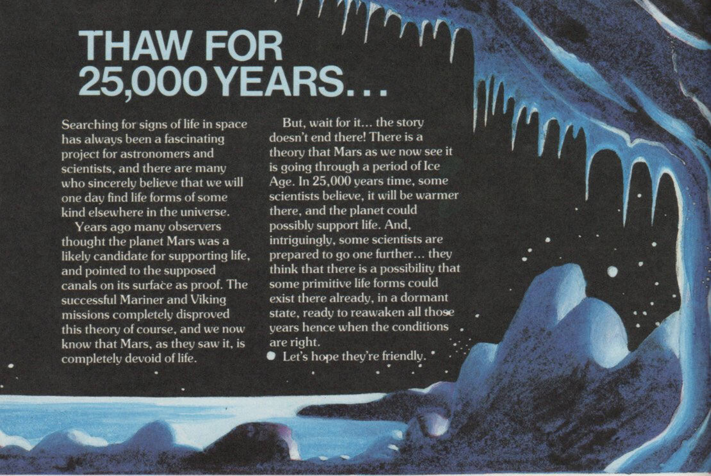
Getting a new episode of Dr Who perfect is, as you can see, very much a team effort, with a tremendous amount of work being done behind the scenes. You can see the combination of talents and expertise of set designer and costume designer in these pictures from *Castrovalva*.



A fireplace becomes the Master's Tardis.



THAW FOR 25,000 YEARS...



Searching for signs of life in space has always been a fascinating project for astronomers and scientists, and there are many who sincerely believe that we will one day find life forms of some kind elsewhere in the universe.

Years ago many observers thought the planet Mars was a likely candidate for supporting life, and pointed to the supposed canals on its surface as proof. The successful Mariner and Viking missions completely disproved this theory of course, and we now know that Mars, as they saw it, is completely devoid of life.

But, wait for it... the story doesn't end there! There is a theory that Mars as we now see it is going through a period of Ice Age. In 25,000 years time, some scientists believe, it will be warmer there, and the planet could possibly support life. And, intriguingly, some scientists are prepared to go one further... they think that there is a possibility that some primitive life forms could exist there already, in a dormant state, ready to reawaken all those years hence when the conditions are right.

● Let's hope they're friendly.

WILL OUR SUN ALWAYS SHINE?

Don't panic when we tell you that the answer to that question is a definite 'no'. One day our sun will die, with devastating effects on the planets in the solar system, but it won't be for some 5,000 **million** years yet, so we needn't worry for a while!

The end will begin when the sun begins to run out of fuel. This will cause huge temperature differences, which in turn will have various dramatic effects. One of the most important will be that the sun will expand to become a 'red giant' star, some 100 times its former size. Mercury and Venus will be engulfed by the giant, and if it expands further there is a possibility that Earth could meet the same end.

After this the sun will begin a period of alternately expanding and shrinking. Gradually all the outer layers will be dispersed, and the collapsed core of the sun will be revealed. It will be so dense that a spoonful of its gas would weigh a tonne or more.

The sun will now be what is called a 'white dwarf', and from then on it will gradually lose its heat, until it ends up as a cold black globe.

The sun is a star, and all stars have a life and a birth, but for some of the largest stars there can be even more dramatic endings, and some, it is thought, can even become those mysterious bodies which we know as 'black holes'.

THE PENALTY

"How is he?" said Nyssa, carrying two steaming hot cups of coffee into the Doctor's room and handing one to Tegan.

Tegan took the coffee gratefully, cradling the cup between her hands and sipping wearily. "As bad as ever," she said. "I've been sitting with him all night and he's shown no sign of recognising me."

Nyssa took a seat by Tegan, her own body crying out for rest. Both girls had been awake for almost two days, standing vigil over the Doctor's sick bed. "How long is this... what is it called... this Ponassan fever supposed to last?"

Tegan shook her head, looking helplessly down at the Doctor as he sweated and moaned on the bed. "I don't know," she said with a hint of frustration in her voice, "I didn't even know it existed until the Doctor caught it!"

Nyssa nodded and sighed. "Then all we can do is wait. Hope for the best and wait until the fever breaks."

"**If** it breaks," corrected Tegan, her face a mask of concern.

On the bed, the Doctor lay semi-conscious, staring at the roof with unseeing eyes. His normally youthful and tanned face looked old and pale and his skin was blistered with beads of perspiration. Occasionally, as the girls watched, he would utter half-formed words and equations, his body writhing as he spoke. Occasionally, his forehead would crease in concentration and his hands would move as if performing tasks. Occasionally, he would shrink back into the blankets, cowering in fear from whatever horrific entities populated his imagination. Occasionally, the Doctor would even scream...

The Tardis control room echoed with the sound of footsteps, the sound of desperate running footsteps which reverberated around the dark and empty room and never seemed to end. The Doctor's footsteps. The Doctor was coming.

The door from the connecting corridor burst open and the Doctor stood framed within it, snapping his head from side to side as he searched out the danger. Something had called him to the control room! Something wanted him! Gasping with exertion, the Doctor ran to the control column, watching as its solitary light pumped shadows up and down the walls. Nothing was wrong! What had called him?

Something began to laugh at the Doctor. Something sinister. Something evil. The laughter got louder and louder, drowning out the Doctor's thoughts as he tried to think. Stop it, thought the Doctor, stop it! And then he knew: **the laughter was coming from outside.**

Sweating and afraid, the Doctor madly flicked switches on the control console. He had to see! He had to activate the Tardis screen!

There was no outside. The screen showed him faces, hundreds of laughing, hysterical faces. The Doctor covered his eyes with his arm, blocking them out. He knew the faces! Old friends and companions. Enemies. Time Lords. All of them people long dead or long gone. They were all out there! And they wanted him! They wanted the Doctor to **go outside!**

The Doctor stood before the Tardis door, waiting, not wanting to press the button that would open the Tardis. But he had to! He couldn't help himself! The Doctor saw his own hand press the button. What was out there? Slowly, the Tardis doors began to swing open. The laughter began again.

Night waited for the Doctor: the blackest, coldest, emptiest night that he had ever seen, a night that pulled the light and warmth from the Tardis and snuffed them out without mercy. A night that beckoned the Doctor! The Doctor stepped forward and …he was falling! Tumbling helplessly and eternally into the night! The Tardis had gone; there was only the Doctor, alone and falling. Falling, falling into the unknown!

"Hello, Doctor," said a young girl, and she was smiling.

"Doctor," echoed a tall, brawny man.

"Doctor, where have you been?" shouted a young scot.

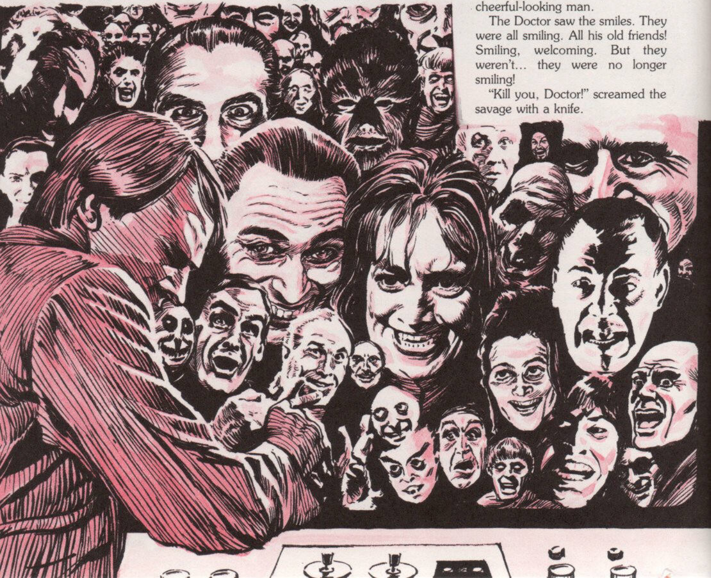
"Rely on me, Doctor," said another face.

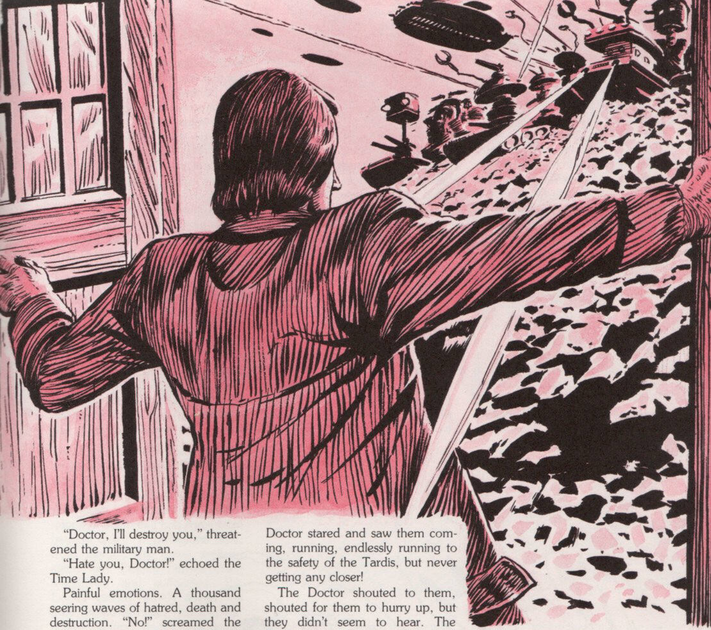
"Goodbye, Doctor, I'll miss you," sobbed a small blonde.

"Take care, Doctor," offered a cheerful-looking man.

The Doctor saw the smiles. They were all smiling. All his old friends! Smiling, welcoming. But they weren't… they were no longer smiling!

"Kill you, Doctor!" screamed the savage with a knife.





"Doctor, I'll destroy you," threatened the military man.

"Hate you, Doctor!" echoed the Time Lady.

Painful emotions. A thousand seering waves of hatred, death and destruction. "No!" screamed the Doctor. "It wasn't like that!"

The faces closed in around him, enlarging, smothering, suffocating. The Doctor yelled at them: "No! No! No!" and then he…

…was elsewhere. A musty, dismal, green-hued planet. A familiar planet. A planet called Thallis! The Doctor stood in his Tardis, the doors flung inward. From over a hill outside, the Thallisans poured: thousands of deadly, robotic war-machines whose war-sirens sounded death! The Doctor ran to the door, desperately trying to close it before they reached him, desperately trying to shut them out. But he couldn't! The door was jammed! And his companions were still out there! The Doctor stared and saw them coming, running, endlessly running to the safety of the Tardis, but never getting any closer!

The Doctor shouted to them, shouted for them to hurry up, but they didn't seem to hear. The Thallisans were firing now, shooting lethal bolts of energy that scarred and incinerated, releasing paralysing clouds of gas that enveloped all! And still they were running! Running! Endlessly…

…pursued by the Dren, heartless mutated reptiles with artificial minds who had come to earth to conquer it! Even now, the nightmarish figures poured from spacecraft all over London, brutally annihilating any humans who stood in their way. Even now, they were invading!

The Doctor waited, hiding in a doorway, his hands clasped over the activating trigger of the trap that would remove the blight of the Dren from the solar system for ever! He had to press the trigger now! But it didn't work! He pressed and pressed, but the Dren continued to advance, coming closer and closer, closer and…

…closer! The Omegans were almost upon him! The Doctor ran, blindly racing through the maze of corridors that the aliens had established at the bottom of the sea! He had mere seconds before the bomb went off! Mere seconds to escape the blast that would puncture the walls of the base and bring tons of sea-water crashing through! Suddenly, the Omegans were upon him, blocking the corridor ahead, challenging his path! He couldn't get past! Mere seconds! Helplessly, the Doctor waited for the first tremor to sound in his ears, waited for the shock-wave that would sweep him into oblivion…

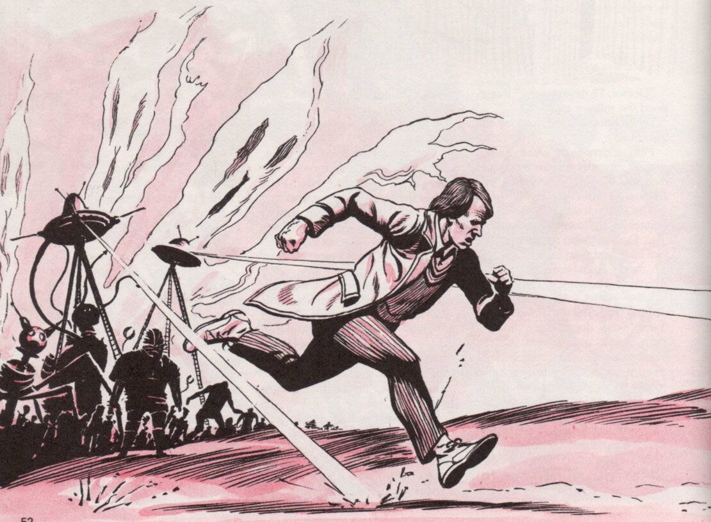
The Doctor sat in the blackness, alone, exposed to the endless night that stretched eternally in every direction. He was cold. He was tired. And he didn't know who he was! Didn't know **what** he was! He had no memories! He was just alone; and something was coming for him!

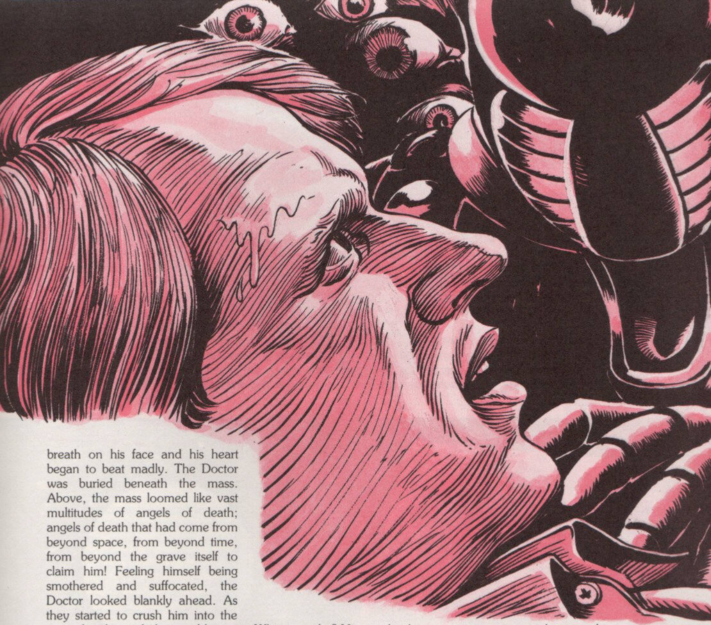
They were pin-pricks on the horizon. Hundreds, thousands, millions of pin-pricks that gradually took form and shape as they walked forward. Figures. Machines. **Things.** The Doctor felt terror clutch at his heart and knew that he had to get away, that he had to run! But to where? Who was he? What was he supposed to do? He had to think! **They** were coming closer!

…The Doctor, he was called the Doctor. He was a Time Lord. He travelled in a Tardis. What was a Tardis? Time and Relative Dimensions in Space. A time and space craft, that was it! He had to get to it! He could not, dare not, forget again!

The Doctor began to run across the blackness, feeling his body jar as his feet landed heavily on the harsh, impossible surface. Behind, he could hear the cries and ghostly beckoning wails of the pursuing mass, calling, pleading for him to stop and allow them to touch. Familiar names and words were cut short as the Doctor gasped for breath after exhausted breath, familiar threats and sounds were ignored as he concentrated only on running. He knew that he had to get away, yet at the same time, the Doctor felt his body slow and turn against his will; turn to face the inevitable horror that lay behind! The Doctor slammed his eyes shut, refusing to look at the sight that came into view, refusing to acknowledge the nightmare, knowing that madness lay in the action! But he could still see! "No!" the Doctor screamed as he looked out on the mass. "No!" There and then he knew that however much he tried, and whatever he did, he could not block out the beckoning horrors and experiences that awaited him!

The figures, machines and things surrounded him. They were everything that the Doctor had ever known, everything that the Doctor had ever fought, everything that he had ever seen die! They couldn't be here! He had to get away! A strangled cry escaped the Doctor's lips as he tried to run, but his legs wouldn't move, they were rooted to the spot! Around him, the mass closed in, pushing and jostling for space, desperate to touch and hold the Doctor. Stop, the Doctor heard his mind object, stop! As he fell to the ground, he could feel their hot





breath on his face and his heart began to beat madly. The Doctor was buried beneath the mass. Above, the mass loomed like vast multitudes of angels of death; angels of death that had come from beyond space, from beyond time, from beyond the grave itself to claim him! Feeling himself being smothered and suffocated, the Doctor looked blankly ahead. As they started to crush him into the ground, a long, dark tunnel began to form before his eyes...

"Doctor!" said a voice.

The Doctor knew that he would not die. Knew that he **could** not die, not yet, not for so long. He knew that he would regenerate, return from death re-formed. Regeneration was both the gift and the curse of the Time Lords. The Doctor had felt the touch of death before, so many times before...

"Doctor!" repeated the voice urgently.

The Doctor opened his eyes, blinking in confusion. Had it happened so quickly? Did he already have a new body?

"Doctor, snap out of it! Wake up!"

The Doctor looked around. Where was he? He saw that he was in his own room in the Tardis. He remembered then what had happened: he remembered exposing the artefact whilst exploring the planet, remembered discovering that it had been smothered in billions of Ponassan germs, and remembered being dragged, feverish, into the Tardis. After that... what?

"You had a nightmare," said Tegan. "For a moment we thought we'd lost you."

Later, when the Doctor was finally preparing to dematerialise the Tardis from the surface of Ponassa, he pondered on what had happened to him. He had read somewhere of a theory that stated that whatever horrors a person meets in a nightmare, they are, in fact, only warped realisations of half-buried memories and experiences, magnified by imagination; fears and feelings that are ignored when awake but let loose when the body slumbers. He vaguely remembered someone describing nightmares as the penalty that has to be paid for enjoying an untroubled day and life—the more adventurous the life, the greater the penalty. The Doctor did not necessarily agree with the description, but it was at times like that that he regretted having adventures that stretched hundreds of years into the past and far into the future, because one thing was for sure: in the time just passed, his penalty had been collected.

To the Far PLANETS

Have you ever wondered how the space probes to the far planets, such as Jupiter and Saturn, are powered and steered? They would need truly tremendous supplies of fuel if they were to travel such huge distances by conventional means.

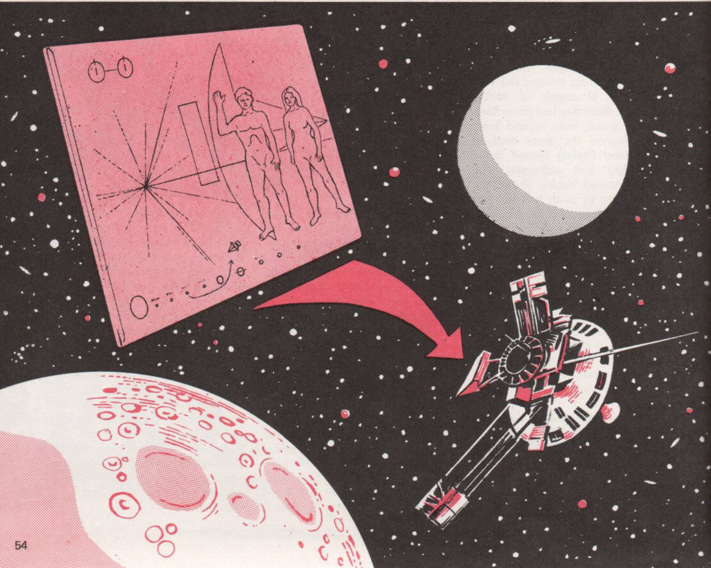
Well, the answer lies in a combination of factors, beginning with the point that the probes are extremely light, compared with, for instance, the manned missions to the Moon. The rockets used to launch the deep-space probes hve tremendous speed at blast-off, and Pioneer 10, for example, swept past the Moon only eleven hours after leaving Cape Canaveral, while the manned Moon missions took some eight times as long.

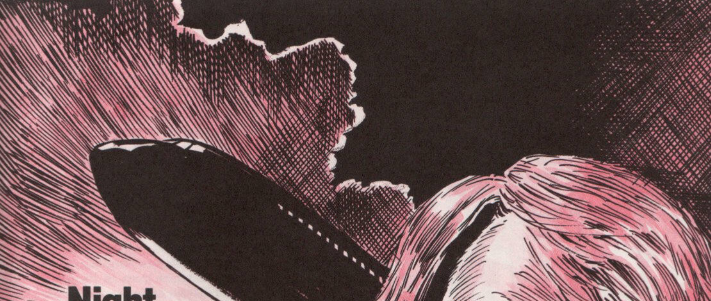
But that isn't the whole story. Intriguingly, the probes use the gravitational pull of the giant planets to send them off on their new courses as they pass by. The pull of Jupiter, for instance, put the probes on course for Saturn.

Finally, the probes can be controlled from Earth even when they are great distances away, because they carry gas-powered thrusters which can be fired from Earth, to increase speed or to change direction.

Incidentally, these probes will move through space for possibly millions of years to come. They are not intended to return to Earth—though they do send back information of course. They will travel indefinitely, and the possibility exists that they might one day be found by alien intelligences in space. If that should happen there is some information on board to help the aliens understand something about our world.

The Pioneer 10 and 11 probes carry a plaque showing human beings, the space craft, and a plan of our Solar System, and two Voyager probes carry disc recordings of sounds of life on Earth. These include a baby crying, the grunts of animals, and the sound of waves crashing onto a shore.





Night Flight to Nowhere

"Will passengers travelling on special charter flight number three-five-seven for San Francisco International Airport please proceed to boarding point D."

The precisely accented tones of the female flight announcer echoed from the public address system speakers placed at various points around the departure lounge of London's Heathrow Airport. Despite the lateness of the hour, the building was bustling with activity, and as the announcement came a buzz of anticipation ran through the crowd. Here and there, small groups of well-dressed business types happily picked up their hand luggage and excused themselves from conversations they had started to pass the time, glad that their wait was over. As they moved off, others sighed with disappointment and checked their watches for the hundredth time, telling each other that the next announcement would be for their flight. Few people present that night could even have dreamed that standing in a little-used storage room nearby was an old-fashioned blue police box that could have taken them on a flight to a place beyond their wildest imagination.

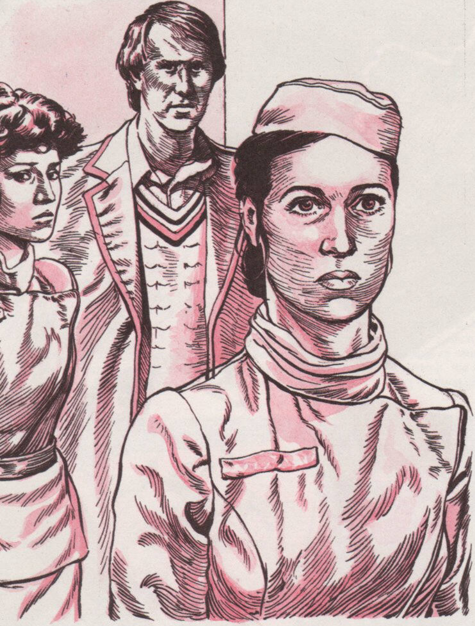
"Julie should be here soon, Doctor," Tegan said. "That was her flight they just announced."

The Doctor nodded without turning to face his young companion, more interested in where he would take the Tardis next, than in meeting Tegan's friend. To him, Time Lords had better things to do than stand around airport terminals for hours on end, but then he had, he reminded himself, promised Tegan just this one little favour.

"I can't wait to see her again!" Tegan offered, trying her best to cheer the Doctor up. "We were best friends on my stewardess training course, you know!"

The Doctor did know; Tegan had told him over and over again. He sighed. One day he would get himself a companion who didn't talk so much. He remembered that Tegan had never really stopped since the day she had accidentally stumbled into the Tardis while on her way to her first job as an airline stewardess.

"Look, Doctor! There she is!" Tegan jumped up and down with glee, attempting to signal her friend through the crowd. "I'll bring her over and introduce you!" And with that, Tegan ran off, scattering a holidaymaker's luggage in her eagerness.



Looking after her, the Doctor wondered how Tegan was going to explain her unexpected reappearance to her friend. Hitching a lift through time from an alien with two hearts was definitely out. Shaking his head, he turned to Nyssa, who had been standing, silently stunned by the business of the airport.

"Never mind, Doctor," she said, smiling sympathetically, "it's nearly over."

But it was only just beginning. When Tegan returned she was alone, her face confused and troubled.

"She didn't know me, Doctor," she said, obviously upset, "she walked right by me as if I didn't exist!"

It took Tegan a few minutes to persuade the Doctor that something was wrong with her friend. Eventually, though, he conceded, and the trio followed Julie Harris through the maze of airport corridors to boarding point D. The Doctor was soon sure that he had made the right decision. Julie Harris walked like a robot, her legs and arms stiff, her eyes glass-like as if she had been hypnotised. The Doctor had seen the symptoms enough times to recognise what was wrong; the girl's mind was under the control of something outside her body!

When they reached the boarding point, a security guard stopped the Doctor and his companions from going through, allowing only Julie Harris to pass when she coldly showed her identification. Disheartened and worried that she could do nothing more to help, Tegan stomped off up the corridor. The Doctor and Nyssa had just started following when the Time Lord stopped and spun back, having spotted something out of the corner of his eye.

At the boarding point, a group of businessmen were filing through. In the centre of them, a darkly-set man looked around, a slight smile of satisfaction on his lips. He was in sight for only a second and then he had moved on, but the Doctor found himself running after him, only to be stopped once more at the gate.

"This flight!" barked the Doctor to the security guard. "Who chartered it?"

"This flight, sir?" answered the guard, checking his roster. "Why, the gentleman who just passed through. Rupert Masters of the Masters Corporation."

"Describe him to me!"

As the guard started talking, the Doctor became aware of the growing whine of turbo-engines from outside on the tarmac. Keeping half his mind on what the guard was saying, he turned and looked out of the window. Through the driving rain and biting wind of a typically dismal London night, he could see the plane preparing for take-off. What was it that the guard was saying? The man had strangely compelling eyes. **Strangely compelling eyes.** As special charter flight number three-five-seven began to taxi down towards the runway, the Doctor stared after it, the expression on his face that of a grimly frustrated hunter whose quarry had eluded him one time too many.

Back in the Tardis, Nyssa reeled in shock after the Doctor had repeated the description that the guard had given him. "The Master!" she gasped in horrified disbelief.

"The Master," echoed the Doctor

without turning from the central console, his mind calmly intent on the task before him. "We have to get aboard that plane." The Doctor said nothing more for the next five minutes, but studied the minutest pieces of information that the various gauges on the console offered him. Never before had he planned to attempt such a spacial jump as he did now, and he was fully aware of how dangerous it could be, but he refused to allow the Master to complete whatever sinister scheme he had in mind. Basing his figures of course, speed and altitude only on a copy of the Master's flight plan that he had acquired from the airport, the Doctor intended to rematerialise the Tardis thousands of feet up in the air, aboard the speeding plane!

It was with horrified trepidation, then, that Tegan and Nyssa watched the Doctor activate the Tardis and declare, "We're ready! Hold on tight!"

The pressurised cargo hold of the plane was dark and gloomy, filled only with the powerful sound of turbo-engines as they sucked in air and thrust it out again, superheated, far out on the wings. Soon, though, that sound was joined by another, the strangely out-of-place wheezing and groaning of the Tardis as it began to materialise in the rear of the hold.

Although the Doctor's computations had been as exact as possible, there was no way that he could have anticipated the jumps and swerves of the plane as it bounced along on air pockets. At first, the Tardis took partial-form a few inches from the floor, at a dangerous slant that threatened to tip it over, causing the time and space craft's altitude alarms to blare through the empty hold. Then, the stabilisers took hold and the Tardis faded from view again, only to rematerialise a couple of feet to the left of where it had been. Still slightly above the floor, the Tardis landed with a bump, sending a couple of packing crates crashing from their pile. Finally, the light on the Tardis roof stopped flashing and, after a delay, the door opened.

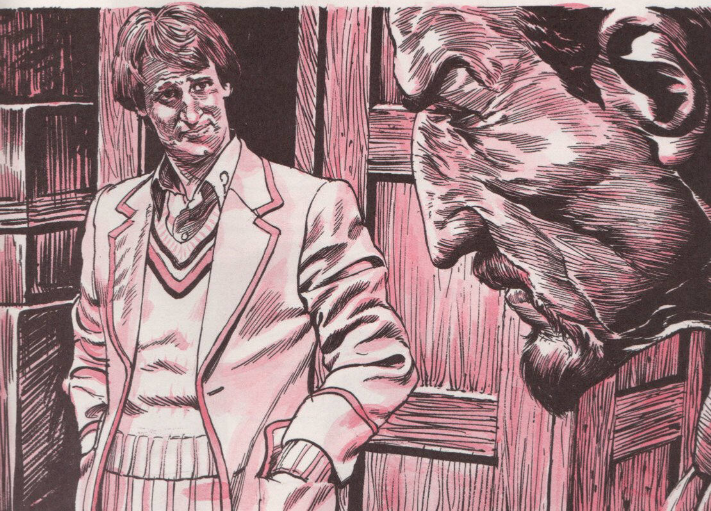
The Doctor stepped out, followed by Tegan and Nyssa, looking shaken but otherwise unharmed.

"Welcome, Doctor," said the Master.

The Doctor spun in the direction of the voice. From a hatch at the end of the hold, the Master stepped into view, his face a mask of smug satisfaction. Three stewardesses appeared behind him, their eyes glazed and zombie-like, their hands holding strange-looking guns. One of them was Julie Harris.

"Julie!" cried Tegan.

"She cannot hear or understand you," declared the Master; "she and the others listen only to me." The Master turned and walked over to the Doctor, his manner that of an old comrade-in-arms instead of the arch-enemy that he really was. He tutted like a schoolmaster re-



proaching a child. "I thought I recognised you at the airport, Doctor. You do get around, don't you! Still, I must congratulate you on getting the Tardis here. They would be proud of you back home on Gallifrey. I am disappointed, though," he added; "it would have been interesting to see what would have happened had you missed!"

"What are you planning?" the Doctor demanded, refusing to be irritated.

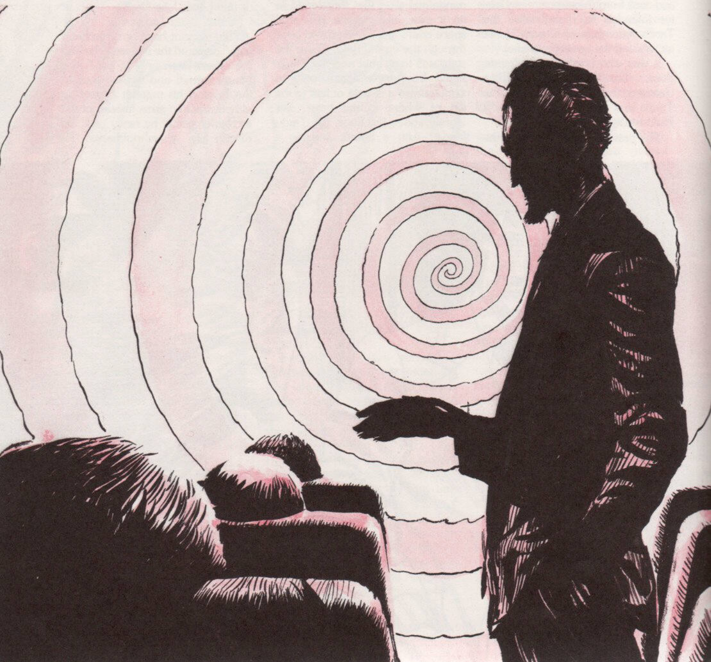
"All in good time, Doctor. All in good time." The Master turned to the stewardesses. "Take them to the others!" he ordered.

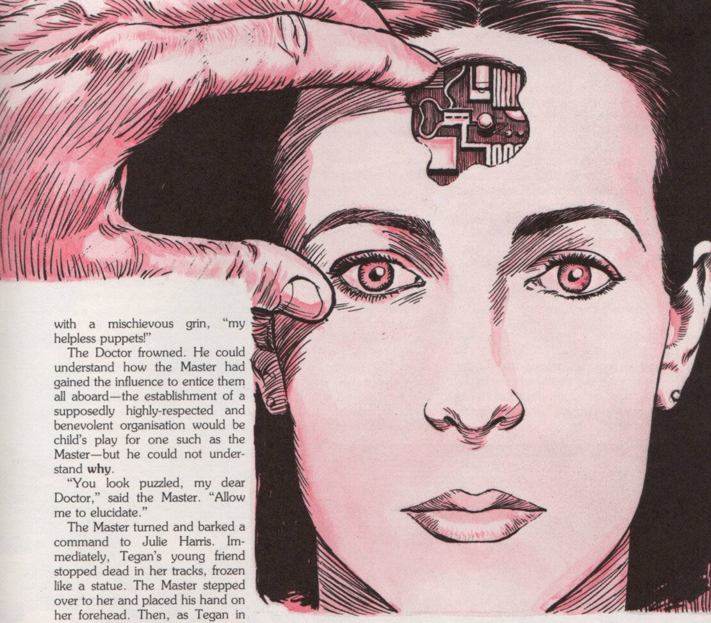
Guns aimed, the stewardesses stepped forward.

The passenger deck of the plane, to which the Doctor, Nyssa and Tegan were taken, and bound securely to seats, slowly danced with projected pools of coloured light which oozed and slithered dreamily across the interior shell. Finding their eyes drawn towards it, the trio saw that the light emanated from a large spinning disc that was attached to the front of the bulkhead and which cast out the colours in shifting, hypnotic patterns. Snatching their eyes away again, they saw what would happen if they watched the disc for too long: in row upon row of seats, people sat in zombie-like silence, seemingly unaware of their surroundings, their eyes fixed ahead of them. They were all in deep hypnosis, mesmerised by the light!

"Who are these people?" asked Nyssa.

The Master smiled and waved his hand over the captives, like a proud shop-owner exhibiting his wares. "Governmental aides. Security advisers. Private Secretaries privy to the innermost secrets of those in power!" The Master dropped his hand. "All of them," he said, satisfied, "the willing guests of the Masters Corporation... and now," he added





with a mischievous grin, "my helpless puppets!"

The Doctor frowned. He could understand how the Master had gained the influence to entice them all aboard—the establishment of a supposedly highly-respected and benevolent organisation would be child's play for one such as the Master—but he could not understand **why**.

"You look puzzled, my dear Doctor," said the Master. "Allow me to elucidate."

The Master turned and barked a command to Julie Harris. Immediately, Tegan's young friend stopped dead in her tracks, frozen like a statue. The Master stepped over to her and placed his hand on her forehead. Then, as Tegan in particular watched in horror, a small section of skin fell away to reveal a complex display of wires and plastic! Julie Harris was an android! Sick, Tegan buried her face in her hands.

"Think of it, Doctor," the Master gloated. "All these passengers hold key roles in high places. And soon they will be replaced by **my** androids, obeying **my** commands, **my** directives! Think of what I could achieve!"

"You don't have to spell it out for me," a solemn-faced Doctor answered. "With the influence these people have in world government, you could reshape countries. With a few carefully-guided decisions, you could attain sufficient power to take over the world!"

"And then, Doctor! And then I could guide its armies into war! Destroy continents! Obliterate the planet which you hold so dear!"

Revenge, thought the Doctor. The Master was still after revenge. "You still have to replace them," he said.

The Master laughed. "You won't stop me this time, Doctor!" He consulted his watch. "In a little over two hours we will have arrived at my destination—which of course is not San Francisco—and then it will all be over." The Master began to laugh. "I defy you to stop me in that time!"

Still laughing, he walked away, heading in the direction of the flight deck.

It took an immense effort of will for the Doctor and the others to avoid succumbing to the hypnotic disc for almost two hours, but they managed it, helped by watching instead blobs of rain as they splattered against the window next to their seats. When the time had almost passed, Tegan gasped in pain, and the Doctor spun his head in concern, afraid that the hypnotism had proved too much for the young Australian. Instead, Tegan stood triumphantly by the seat, clutching a small nail-file and waving the severed straps that had been holding her down!

"Well, if we're going to help Julie and the others," she said, smiling, "we can't do it sitting around!"

Tegan cut the Doctor and Nyssa free, ensuring that the android stewardesses were not around to see their escape. Rubbing their sore wrists, the trio moved to the window and looked out, trying to determine their location. Outside, a storm raged, tumultuous rain and thunder cracking the sky. Through a thin layer of cloud, Tegan began to recognise a coastline that she had been made familiar with in training school.

"Of course!" she yelled. "It's the south-east coast of North America!"

"So?" said Nyssa.

"So," Tegan continued, "that means we're flying over..."

"The Bermuda Triangle," interrupted the Doctor. "Legendary vanishing point of hundreds of earth ships and planes. The perfect place for the Master to choose! To the authorities, this flight will be just another logged as inexplicably missing!"

"And when the Master has replaced these people, it will reappear again, just like many others have done. There will be no investigation!" cried Tegan. "Doctor, we have to get onto that flight deck!"

The Doctor was already moving towards it.

When the Doctor burst through the door onto the flight deck, the Master spun in shock and surprise, but he still had enough presence of mind to be holding a gun in his hand. The Doctor, Tegan and Nyssa backed off against the wall. They all knew that the Master would have no hesitation in using it!

"It's too late, Doctor! Look!" the Master boasted, pointing out of the front windscreen.

Ahead of the plane was a nightmare. The Doctor knew immediately what it was. The Master had used his Tardis to rip a hole in the fabric of space, a rip which manifested itself in a bright red gash that spread down from the heavens! A gash through which the plane was about to disappear!

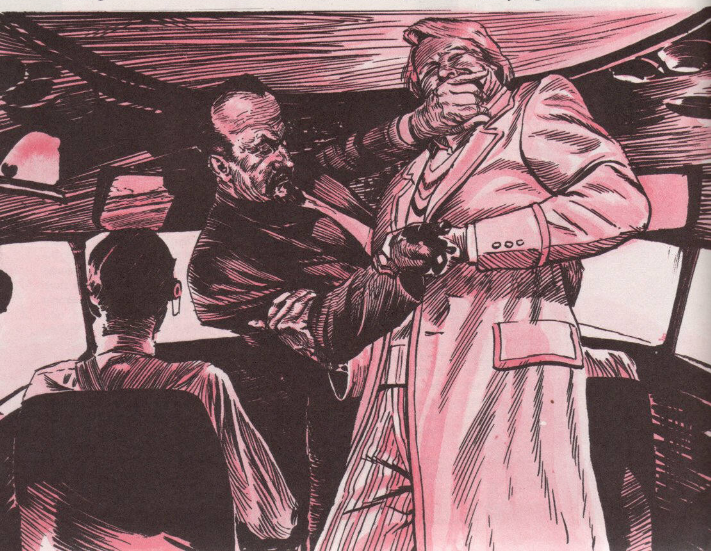
"Once we have passed through, Doctor," the Master cried, "you will be in my domain!"

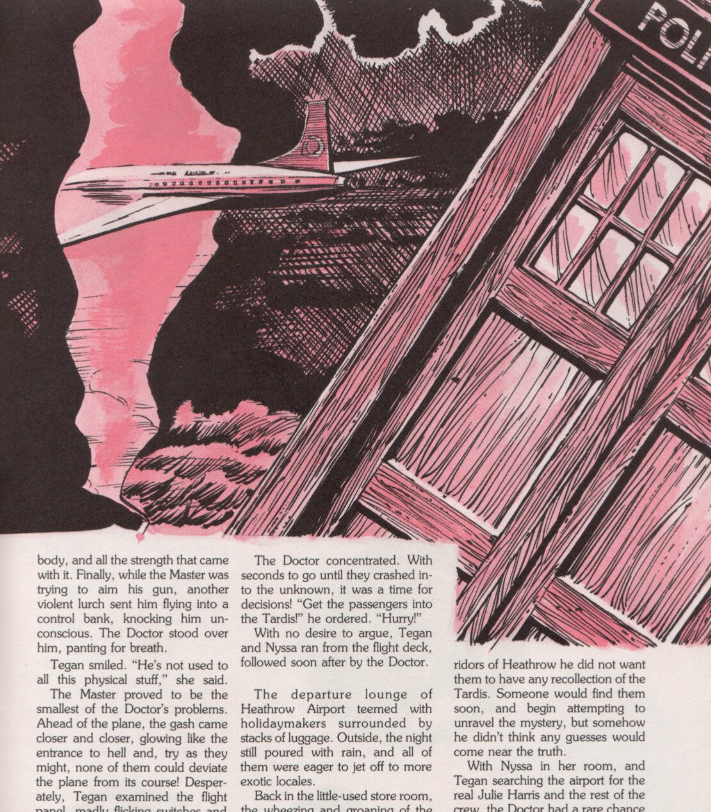
Already, the first waves of turbulence from the rip were hitting the plane, and everyone on the flight deck had to steady themselves. Only the pilots, relentlessly aiming their plane towards the gash, seemed unperturbed. More of the Master's androids!

Taking advantage of the situation, the Doctor threw himself at the Master. His timing was perfect; as the ship lurched badly, the two Time Lords tumbled to the floor!

"Not now, Doctor!" screamed the Master. "I won't allow it!"

Despite the Master's confidence, he soon found himself losing the desperate struggle. Although both were Time Lords, the Doctor had the younger and fitter physical





body, and all the strength that came with it. Finally, while the Master was trying to aim his gun, another violent lurch sent him flying into a control bank, knocking him unconscious. The Doctor stood over him, panting for breath.

Tegan smiled. "He's not used to all this physical stuff," she said.

The Master proved to be the smallest of the Doctor's problems. Ahead of the plane, the gash came closer and closer, glowing like the entrance to hell and, try as they might, none of them could deviate the plane from its course! Desperately, Tegan examined the flight panel, madly flicking switches and adjusting dials, trying to ignore the pilots as they calmly steered the plane into the Master's domain! Barely controlling her panic, she finally stood back from the console. "It's no good! The Master has jammed the controls!"

The Doctor concentrated. With seconds to go until they crashed into the unknown, it was a time for decisions! "Get the passengers into the Tardis!" he ordered. "Hurry!"

With no desire to argue, Tegan and Nyssa ran from the flight deck, followed soon after by the Doctor.

The departure lounge of Heathrow Airport teemed with holidaymakers surrounded by stacks of luggage. Outside, the night still poured with rain, and all of them were eager to jet off to more exotic locales.

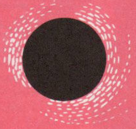
Back in the little-used store room, the wheezing and groaning of the Tardis began to sound, and as soon as he possibly could, the Doctor disembarked his passengers. He knew it would not be long before the hypnotic effects of the Master's sinister light show wore off, and as he ushered them out into the corridors of Heathrow he did not want them to have any recollection of the Tardis. Someone would find them soon, and begin attempting to unravel the mystery, but somehow he didn't think any guesses would come near the truth.

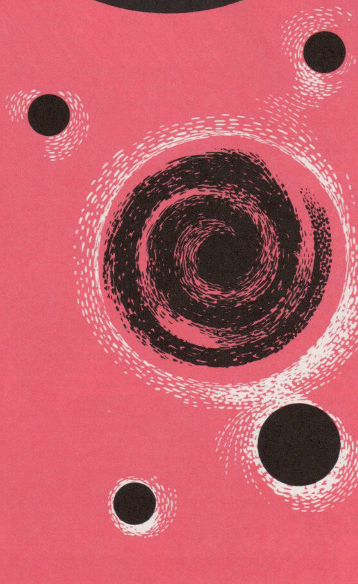
With Nyssa in her room, and Tegan searching the airport for the real Julie Harris and the rest of the crew, the Doctor had a rare chance to be alone.

He wondered what had happened to the Master in the gash. Would he survive? Would he return? With a nod of inevitability, the Doctor realised that the answer was definitely, very definitely, yes.

BLACK HOLES

What do we know about them?



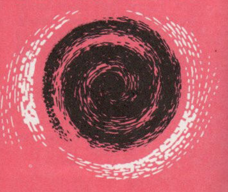


Black holes present scientists with one of the most baffling phenomena they have ever researched. The problems and the mysteries they present are complex and even bizarre, and scientists start off with the basic difficulty that black holes can't even be seen.

So just what has been discovered about them?

Well, the basic theory is that black holes are giant stars which, at the end of their lifetime, have collapsed inwards on themselves, with the matter they were composed of getting packed closer and closer together as the star gets smaller. Some scientists even think that the collapsing process just goes on and on, infinitely, even after the stage when a spoonful of the star's matter would weigh millions of tons.

The gravitational pull of this small, incredibly dense object is enormous. Anything which ventured near it would get sucked in and would not be able to escape. This includes light



itself. And once the star has reached this stage, and become a black hole, it would seem that all the laws of science, as we know them, just do not hold true anymore.

No one can be sure what would happen if, say, an astronaut were to enter a black hole—and no one yet has tried! The theory suggests that his body would be stretched out until it was finally broken down into atoms, but that his image would linger outside the hole for perhaps millions of years. The reasons for this are too complex for non-scientists to understand, and if you decide to research into black holes you'll probably find you get more, rather than less, confused!

The question of what would happen if man could find a way of surviving a fall into a black hole is particularly intriguing. Some scientists have speculated on whether, because all the rules as we know them would have been broken, the astronaut, emerging on the other side, might not find himself travelling **backwards** through time.

And there is another theory—again too difficult to explain in a few words—which suggests that all black holes throughout the universe might be in some way connected by their effects of 'bending' time, and that it might be possible to travel **through** them on a fantastic journey through space and time. (Does that remind you of someone?!)

The Big Bang Theory of the beginnings of our universe which states that the Universe began with a big explosion scattering matter in all directions—has been further developed by some black hole experts. They are pondering whether or not **our** universe, which we know to be constantly expanding, might not have been formed by matter bubbling up out of a black hole in **another** universe, somewhere else in space and time.

Mind-boggling stuff, isn't it?

And just to end on a fanciful note... some scientists have suggested that it might be possible in future years to kill two birds with one stone. That is, we might be able not only to dump huge masses of our unwanted rubbish into a black hole, but also to somehow harness the resulting energy from the increased gravitation that it would produce.

Well, it's vaguely possible, considering the advances we have already made in space. But there's a catch... The larger a black hole grows the more powerful it becomes, sucking more and more of its surroundings into it. Thus it would not be beyond the bounds of possibility that our 'rubbish dump' black hole might one day need much more 'rubbish'—and swallow our entire planet into its mysterious dark depths!